A Case Study of Using Synchronous Computer-Mediated Communication System for
Spoken English Teaching and Learning Based on Sociocultural Theory and
Communicative Language Teaching Approach Curriculum

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This dissertation titled
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Spoken English Teaching and Learning Based on Sociocultural Theory and
Communicative Language Teaching Approach Curriculum

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ABSTRACT


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The purpose of this qualitative study is to investigate how instructors and learners understand their experiences of using an SCMC system for spoken English teaching and learning. Vygotsky’s sociocultural theory and communicative language teaching approach provided the theoretical framework to create the curriculum and learning activities within the instructional program. The theoretical frameworks guided the study in interpreting and analyzing the phenomena resulting from the participants’ perceptions of the real-time, web-based instructional program. The study also examined the role of instructors and learners, and an instructor’s competence for instruction in an SCMC language learning environment.

Multiple approaches were used to collect data: in-depth, semi-structured interviews, participant observations, and course evaluation. Qualitative inductive data analysis techniques were adapted for data analysis. The participants were four instructors (1 adjunct instructor and 3 graduate students) at two Midwestern state universities, and seven learners (company employees) in China and Taiwan.

Findings from this study concluded that all participants preferred teaching and learning in a traditional face-to-face environment because of insufficient interaction and social presence available using the SCMC system. An adjustment of instructional
strategies depending on the degree of presence which the SCMC system could mediate was needed to promote interaction and social presence. Learners’ learning behaviors and attitudes reflected the major components of the two theories built in the curriculum and learning activities: mediation, negotiation of meaning, zone of proximal development (ZPD), collaboration and scaffolding, self-regulation, and communicative competence.

The study determined the SCMC systems’ weaknesses—unstable Internet connection, limited image size, namely technical problems. The major strengths of the program included promotion of interaction and communication, availability of different social interactions, flexibility of geography and time, compatibility of the system with other technologies, and reinforcement of learners’ confidence. The participants’ and the researcher’s experiences formed an ISIS theoretical framework in which the important theories, approaches, components, and procedures were embedded, and suggested further study of instructional programs. In conclusion, SCMC has its potential within CALL, and more efforts for theoretical and practical research are urgent and necessary.

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## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>3</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td>5</td>
</tr>
<tr>
<td>List of Tables</td>
<td>14</td>
</tr>
<tr>
<td>List of Figures</td>
<td>15</td>
</tr>
<tr>
<td>Chapter 1: Introduction</td>
<td>16</td>
</tr>
<tr>
<td>Background of the Study</td>
<td>16</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>19</td>
</tr>
<tr>
<td>Research Questions</td>
<td>21</td>
</tr>
<tr>
<td>Theoretical Framework</td>
<td>21</td>
</tr>
<tr>
<td>Participants</td>
<td>25</td>
</tr>
<tr>
<td>The Settings</td>
<td>26</td>
</tr>
<tr>
<td>Methodology</td>
<td>28</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>31</td>
</tr>
<tr>
<td>Limitations and Delimitations of the Study</td>
<td>32</td>
</tr>
<tr>
<td>Definitions of Terms</td>
<td>33</td>
</tr>
<tr>
<td>Chapter 2: Literature Review</td>
<td>36</td>
</tr>
<tr>
<td>Introduction</td>
<td>36</td>
</tr>
<tr>
<td>Computer-Assisted Language Learning</td>
<td>36</td>
</tr>
<tr>
<td>Theory and Application of CALL</td>
<td>37</td>
</tr>
<tr>
<td>Teacher Preparation for CALL</td>
<td>41</td>
</tr>
</tbody>
</table>
Communicative Teaching Approach in Foreign Language Learning and Second Language Acquisition Classrooms ..............................................................44

Teaching Communicative Competence .............................................47

The Role of Teachers and Students in CLT Classroom .........................49

CLT Curriculum .............................................................................53

CLT Activities .................................................................................56

Summary ........................................................................................58

Vygotsky’s Sociocultural Theory .........................................................59

Sociocultural Theory and Application in foreign and
Second Language Learning .................................................................59

Semiotic Meditation and Tools ..........................................................60

Zone of Proximal Development ..........................................................61

Scaffolding and Collaborative Learning .............................................64

Activity Theory ................................................................................66

Sociocultural Theory and Synchronous Computer-Mediated
Communication .................................................................................67

Synchronous Computer-Mediated Communication and Language Learning........70

Significant Characteristics and Rationale of SCMC for
Spoken English Training .................................................................72

Challenges of SCMC for Spoken English Instruction.............................73

Implications for SCMC Curriculum Design and Teacher’s Competencies ......74

SCMC Curriculum Design ................................................................77
Chapter 3: Methodology

Introduction

A Case Study

The Online Synchronous Spoken English Instruction

Preparation Stage

Testing Stage

Implementation Stage

Evaluation Stage

Pilot Study

Research Participants

Data Collection

Semi-Structured In-Depth Interviews

Interview of Instructors

Interview of Learners

Observations

Participant Observations

Course Evaluation

Data Analysis

Trustworthiness and Triangulation of the Data

Chapter 4: Findings
Introduction ........................................................................................................108

The Instructors’ Experiences of the Instruction in an SCMC Context ..............109

Instructors’ Perceptions of Web-Based and Face-to-Face Language Teaching Environment .............................................................109

Use of SCMC Technology for Instruction .......................................................113

Facilitating Learning in SCMC and SLA/FL Context ....................................119

Instructional Strategies ...................................................................................125

Instructor’s Role in an SCMC and Spoken English Instructional Program ......128

Instructors’ Competencies for Online SCMC Spoken English Instruction ......132

Instructors’ Experiences with the Learning Activities within the Curriculum ......136

Enhancement of Interaction and Communication Based on the Curriculum and Learning Activities in an SCMC Environment ........................................138

Discourse in Online Class as a Mediational tool for Spoken English Development .................................................................142

Meaning Conveyed and Negotiated through Discussion within Activities ......148

ZPD and Scaffolding in a Collaboration SCMC Environment ........................152

Summary .........................................................................................................155

The Learners’ Experiences of Taking the Spoken English Instruction in an SCMC Context .................................................................156

Learners’ Perceptions of Web-Based and Face-to-Face Language Learning Environment .............................................................156

Use of SCMC Technology for Learning ........................................................160
Internet Connection as a Factor for Online Learning ........................................161
Problems with the Use of SCMC and Course Management Systems
for Learning ...........................................................................................................163
Use of SCMC as an Early Adopter ......................................................................165
Opportunity for Interaction and Communication ..............................................171
Factors Affecting Interaction and Communication ...........................................175
Learning in an SCMC and SLA/FL Context ....................................................180
Learners’ Role .....................................................................................................180
Learning through Scaffolding and Collaboration ............................................183
Self-Regulation ..................................................................................................187
Self-Efficacy and Goal Orientation ....................................................................188
Management Course and Learning ..................................................................190
Perception of Instruction and Curriculum ......................................................193
A Curriculum to Promote Interaction in an SCMC Learning Environment .........197
Learners’ Perception of Instruction ....................................................................202
Strengths and Weaknesses of Learning Spoken English
in an SCMC Environment ..................................................................................215
Conclusion ..........................................................................................................218
Chapter 5: Discussion and Conclusion ............................................................220
Introduction ...........................................................................................................220
Teaching and Learning in an SCMC and SLA/FL Environment .........................221
Interaction and Social Presence Affecting Communicators’ Perspective on Teaching and Learning between an SCMC and a Traditional Classroom

Environment ......................................................... 221

Attribution of Interaction ........................................ 222

Instructional Strategy to Promote Interaction in SCMC Context ............. 224

Formulation of Instruction ....................................... 224

Social Interaction .................................................... 226

Summary .............................................................. 228

Instructors’ and Learners’ Role in an SCMC Spoken English

Instructional Program ............................................ 229

Role of Instructor .................................................. 229

Role of Learner .................................................... 230

Summary .............................................................. 232

Curriculum and Learning Activity Design Based on Sociocultural Theory and CLT Approach ............................................. 233

Features of Curriculum and Learning Activity Design ......................... 233

Facilitating Spoken English Learning in an SCMC Environment ............ 237

Instructors’ Competencies ....................................... 237

Strengths and Weaknesses ....................................... 238

A Conceptual Framework of Instructors’ Preparations for Facilitation of Spoken English Learning in an SCMC Environment ....................... 243

Conclusion ........................................................... 248
Recommendations for Future Research .............................................................. 252
References ........................................................................................................... 255
Appendix A: Sample Curriculum ...................................................................... 282
Appendix B: Sample Lesson Plan .................................................................... 283
Appendix C: Teaching and Learning Policy ...................................................... 286
Appendix D: Weekly Newsletter ...................................................................... 288
Appendix E: Correlation among Variables ...................................................... 291
Appendix F: Placement Test ............................................................................ 292
Appendix G: Summative Test ......................................................................... 294
Appendix H: Interview of Instructor ................................................................. 296
Appendix I: Interview of Learner ................................................................... 298
Appendix J: Observation Notes ....................................................................... 300
Appendix K: Course Evaluation ....................................................................... 302
Appendix L: Social Presence: Finding and Discussion ..................................... 306
Appendix M: Ohio University Consent Form ................................................... 323
Appendix N: Institutional Review Board ........................................................... 329
LIST OF TABLES

Table 1: The Results of the Placement Test and the Achievement Assessment .............195
Table 2: The Results of Course Evaluation .........................................................203
Table 3: Course Evaluation: Q1 (Motivation Construct) ......................................204
Table 4: Course Evaluation: Q2 (Motivation Construct) ......................................205
Table 5: Course Evaluation: Q3 (Motivation Construct) ......................................205
Table 6: Course Evaluation: Q4 (Motivation Construct) ......................................206
Table 7: Course Evaluation: Q6 (Motivation Construct) ......................................206
Table 8: Course Evaluation: Q8 (Technology Savvy Construct) ......................... 207
Table 9: Course Evaluation: Q9 (Technology Savvy Construct) .........................207
Table 10: Course Evaluation: Q10 (Interactivity Construct) ..............................208
Table 11: Course Evaluation: Q11 (Interactivity Construct) ..............................209
Table 12: Course Evaluation: Q12 (Interactivity Construct) ..............................210
Table 13: Course Evaluation: Q14 (Interactivity Construct) ..............................210
Table 14: Course Evaluation: Q15 (Effectiveness Construct) .............................211
Table 15: Course Evaluation: Q16 (Effectiveness) ...........................................212
Table 16: Course Evaluation: Q17 (Effectiveness) ...........................................212
Table 17: Course Evaluation: Q18 (Effectiveness) ...........................................213
Table 18: Course Evaluation: Q19 (Effectiveness) ...........................................213
Table 19: Course Evaluation: Q23 (Satisfaction) .............................................214
Table 20: Course Evaluation: Q24 (Satisfaction) .............................................214
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>A Model for the Innovative Use of SCMC for Spoken English Training for Foreign Students</td>
<td>90</td>
</tr>
<tr>
<td>Figure 2</td>
<td>A Conceptual Framework for Design and Facilitation of a Real-Time, Online Spoken English Learning in SCMC Context</td>
<td>245</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Research Model (Interaction, Social Presence in Technology Mediated Learning—A Partial Least Square Model)</td>
<td>322</td>
</tr>
</tbody>
</table>
CHAPTER 1: INTRODUCTION

Background of the Study

The trend of globalization has dramatically changed people’s views on learning spoken English. People deem spoken English competencies not only as a communication skill, but also, most importantly, as a basic skill in daily life. According to a report, *English Next*, commissioned to David Graddol by the British Council (2006), it is estimated that more than 2 billion people will learn English by 2010. Apparently, there is a huge demand in the market for foreigners to learn English, especially spoken English. To enter global markets, international enterprises require their employees to learn spoken English, so they will be capable of handling business affairs with foreign companies. Therefore, business employers provide professional development both in enhancement of their employees’ professions and in their spoken English competence.

In schools worldwide, English communication skills are one of the most important subjects highlighted and emphasized. The Educational Testing Service (ETS) has redesigned the TOEFL test to improve the speaking section of the test (which evaluates the competence of nonnative English speakers) for those who want to study in English-speaking countries and who desire to communicate effectively in those countries.

The development of new telecommunication technology, Synchronous Computer-Mediated Communication (SCMC), provides an innovative way to learn spoken English. Traditionally, learning has been accomplished in the classroom through face-to-face interaction between learners and teachers. SCMC now can allow learners to achieve their learning goals through the Internet, regardless of time and geographic
boundaries. When SCMC emerged, it was used mainly for commercial purposes; however, it has recently been adopted for teaching and learning spoken English. This technology combined with audio and video functions and other innovative features promotes interaction and communication among interlocutors for online language teaching and learning. It allows adult learners in particular to improve spoken English without paying high travel and living expenses in English-speaking countries. Moreover, according to recent research (Lee, 2002; Yamada & Akahori, 2007), teachers and learners have positive attitudes toward the use of SCMC to improve their teaching and learning. SCMC can promote effective instruction of communication skills and extend the interactions and social presence between instructors and learners, and learners and learners.

Although SCMC has the potential to promote communication in second or foreign language teaching and learning, it has not been widely used by spoken English educators. One reason is that most popular SCMC systems (such as Skype, MSN Messenger, Yahoo Messenger) were created for commercial purposes, while few have been designed specifically for education or training (e.g., Adobe Connect). The interface, functions, navigation, and audio quality of commercial SCMC systems fall short of the standards and the needs of pedagogy and learning. These insufficiencies limit the application of learning theory and pedagogical approaches to the use of SCMC in spoken English instructional program. On the other hand, the high cost of the instructional SCMC system (e.g. Adobe Connect) might be one reason for its limited use.
An exploratory study by Lee et al. (2007) found that pedagogy and technology were the two major elements in the use of SCMC in spoken English teaching and learning between the United States and China. Learners’ motivation in the instruction, learners’ technological savvy, effectiveness of the instruction, interactivity under the SCMC context designed by the instructor, and satisfaction with the instruction were five paramount factors affecting both elements. For instance, an instructor’s effective instruction and technological skills can directly influence the learners’ attitudes and motivations in the use of SCMC to achieve their learning goals. The findings emphasized the importance of quality online pedagogy, an instructor with sufficient computer competencies, and a well-designed curriculum based on instructional design strategy and learning theory. The study concluded that further research should examine those crucial elements to investigate how to train online spoken English instructors to provide holistic instruction, to determine what competencies the instructors should have and to develop methods to assist them in designing an appropriate curriculum with the use of SCMC systems.

Furthermore, Heins, Duensing, Stickler, and Batstone (2007) investigated the nature and level of interpersonal interaction in both online and face-to-face English oral skill tutorials. They concluded that “spoken interaction is successfully taking place in both the online and face-to-face language learning environment” (p. 279). Rosell-Aguilar (2005) sought to find out the variance between online and face-to-face language courses through a large-scale quantitative study. As a result, the author found very minor differences in gender and attendance. Moreover, Chun (1998) and Warschauer (1996)
revealed that second language acquisition learners can have equal opportunities to participate in discussion in an SCMC context as they can have in face-to-face communication. Abrams (2003) examined the difference in oral interaction and performance among face-to-face asynchronous computer-mediated communication (ASCMC) and synchronous computer-mediated communication (SCMC) contexts and confirmed the previous research findings that SCMC promotes the amount of output because of learners’ motivations and interactions. The study also found that there was no difference in the richness of lexicon and syntax among the control group and the two computer-mediated communication (CMC) groups.

Statement of the Problem

Although previous research has revealed the weak points of ASCMC and SCMC, the research literature has supported that ASCMC and SCMC contexts can promote oral interactions just as well as the typical classroom environment. However, few studies have provided in-depth details suggesting how to improve the SCMC environment based on underlying theories and instructional strategies.

Another critical issue regarding the use of SCMC for the teaching and learning of spoken English relates to the underlying theoretical framework. Vygotsky’s sociocultural theory has been a focus for spoken language acquisition (SLA) in the typical classroom context (Lantolf, 2000). That is, “[l]anguage can be studied in its social context” (Kramsch, 2000, p. 134). Researchers have implemented the sociocultural theory in SLA not as the acquisition of both the form and meaning of a word or a phrase, but as a situated context involving the individual and the social setting where the interactions
occur. Vygotsky’s theory has also been applied to the use of ASCMC and SCMC in second language research on interaction (Darhower, 2002; Heins et al., 2007), social presence (Yamada & Akahori, 2007), task design (Rosell-Aguilar, 2005), and the prototype of a computer dialogue system (Chiu, Liou, & Yeh, 2005; Stewart & File, 2007). However, little research has investigated whether a curriculum, task, or activity designed on the basis of sociocultural theory is suitable for learning spoken English in an SCMC environment.

In addition, the communicative language teaching approach (CLA) is one of the underlying theories adapted in SLA/FL traditional classroom or web-based contexts. Brown (1994) pointed out the core of CLA which creates opportunities for genuine interaction in terms of group work, authentic language input in real-work context, and meaningful communication in classroom. Recent research employed CLT to investigate discourses within communications in asynchronous CMC setting (Meskill & Anthony, 2005), or oral proficiency in voice-based context (Vetter & Chanier, 2006) have been publish to incorporate CLT theory and CMC. The gap between CLT and SCMC audio and video settings still exist and need to be studied when the increasing use of this system for spoken English teaching and learning.

Considering the critical points mentioned above, the researcher designed learning activities (e.g., role-playing, scenarios, and group discussions) within curriculum to provide the social and cultural context of spoken English instruction and learning. The alignment of the sociocultural theory and CLA with the present study aimed to investigate more specific questions below to understand the use of SCMC in spoken
English teaching and learning through acknowledging the real phenomena happening among instructors, learners, and SCMC where interactions and communication occurred.

Research Questions

The research specifically investigated the following questions:

1. How do the instructors understand their experiences of delivering spoken English instruction in a real-time, online context and what meaning do they give their experiences? What are their experiences with the learning activities based on the provided curriculum? What are the strengths and weaknesses of the instruction from their point of view? What competencies or skills should a synchronous online spoken English instructor have?

2. How do the learners understand their experiences of taking the spoken English instruction in a real-time, online context and what meaning do they give their experiences? How do they learn? What are their perceptions of the instruction and curriculum? What are the strengths and weaknesses from their point of view?

Theoretical Framework

The study adopted Soviet psychologist Vygotsky’s (1978) sociocultural theory which has been regarded as a fundamental theoretical framework of computer-mediated communication (Hauck & Youngs, 2007; Kidate, 2000; Simpson, 2005). Sociocultural theory emphasizes that an individual’s mental development can be achieved with meaningful verbal interactions with others in social contexts which involve complex and higher mental functions (Lantolf & Thorne, 2006). Vygotsky formulated two levels of development of children to clarify how they transit from potential development to actual
development, which is referred to as the Zone of Proximal Development (ZPD). “It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86). Society provides children with a variety of tasks and demands that require them to depend upon adults to solve problems. When they can independently solve problems and achieve their goals without adults’ guidance, the ZPD disappears. The transition between the two levels is made by language negotiation deemed as mediation to help children communicate with adults.

Although Vygotsky’s sociocultural perspective focused on the development of children, the theory has been successfully implemented among young adult learners in the foreign language learning (FL) and second language acquisition (SLA) context (Ohta, 2000). Second and foreign language learners use language to mediate social interactions between themselves and peers, teachers, or other people. That is, language can be a cognitive tool for learners to mediate thought on their psychological or mental plane. Consequently, language, individual mental development, and social interaction are interrelated. Many studies have implemented the noted sociocultural theory in FL and SLA in the context of face-to-face oral interaction (Consolo, 2006; Donato, 2000; Naughton, 2006; Ohta, 2000; Swain, 2000).

SCMC is an innovative learning approach highly dependent on computers and the Internet to provide the mediation to allow interlocutors to interact with one another. Through the connections, interactions, and communication in the SCMC environment,
FL and SLA learners take advantage of real-time, online audio and video oral discourses to convey their thinking, negotiate the meaning of words, and cooperate with one another to accomplish their learning activities. In the process of learning, the low-skill learners obtain knowledge and experiences mediated by high-skill learners from different areas of the world. The low-skill learners will continue this process until they no longer need help from high-skill learners to independently perform and solve problems. These low-skill learners have transitioned from the actual developmental level to the level of potential development. That is, Vygotsky’s sociocultural theory and his notion of ZPD may have relevance for FL and SLA in SCMC contexts (Levy & Stockwell, 2006).

Other learning theories have influenced FL and SLA, namely the behaviorist approach, the universal grammar approach (UG) and the communicative language teaching approach (CLT). Behaviorism deems language learning as a set of habits that can be imitated or replicated from other people. Stimuli, responses, and reinforcements are necessary to construct the habits. Behaviorism has had a significant impact on the foreign and second language teaching approach known as audiolingualism, which focuses on drills and repeated practice of structures. While behaviorism focuses on observable behaviors which are another aspect of human nature (Berns, 1990), the universal features of language based on Chomsky’s viewpoints (1965) claims language is a purely cognitive phenomenon, “a restricted psychological phenomenon” (Jordan, 2004, p. 6). Chomsky argued that language is a complicated and abstract system of rules, and linguistic principles are applied to explain the system and to assist learners in learning it. In contrast, Halliday (1973) proposed that language provides a system resource or a function
for people to deliver meaning, not grammatical structures in social contexts. Obviously, Holliday’s semantic view of language differentiates the syntactic view by Chomsky.

Language serves as a tool to convey functional meaning through interaction and communication. It constitutes four skills (listening, speaking, writing, and reading); however, oral communication is the most complicated technique. Broughton et al. (1980) pointed out that in the process of spoken communication, the speaker comes up with a thought and transforms it into language; the listener recognizes and identifies the sequences of voices from the speaker; as a result, the listener comprehends the thought. Canale and Swain (1980) indicated that communicative language teaching approach (CLT) language serves a functional and communicative role for the interlocutors to express and negotiate meanings through interaction with one another. The aim of CLT is to enhance learners’ communicative competence which includes grammatical and sociolinguistic discourse, and strategic domains of knowledge and skills. Similarly, Liao (2000) agreed that CLT regards language as “a functional system” (p. 262). Namely, in order to communicate effectively, the speaker must correctly produce grammatical discourses of language as well as appropriately use it in distinct sociolinguistic contexts. The underlying ideas of these various theories, applied in linguistics, have also emerged in computer-assisted language learning.

Computer-assisted language learning (CALL) has emerged and been researched in teaching FL and SLA over the past three decades. The principles of CALL can be historically divided into three phases: behaviorist, communicative, and integrative CALL (Warschauer & Healey, 1998). Converging the three theories, the principle use of the
computer focuses on drill and practice, communicative exercises, and authentic discourse (Warschauer, 2000). However, Bax (2003) criticized Warschauer and Healey’s three phases citing inconsistencies in terms of chronology and unclear criteria. Bax argued that it is difficult to deny that communicative CALL is no longer heard and has been replaced by integrative CALL in current teaching contexts. In integrative approaches, learners use technologies in the process of language learning through the use of four skills: speaking, listening, reading, and writing. Given the use of these four skills, “there was no change at all” (Bax, 2003, p. 19) from communicative CALL to integrative CALL.

In this study, CLT is one of the theoretical frameworks for FL and SLA in computer-assisted language learning. CLT’s paradigms emphasize the use of task-based and content-based approaches to enhance learners’ understanding of meaning and formation of language. Most importantly, learners can appropriately use language in different social contexts, and the tasks or activities can be planned and implemented through computers. Furthermore, the CLT concept is also compatible with the Vygotskyan sociocultural model of language learning which has been used in CALL. Learners can use the computer as a mediation tool to reach their optimal development level (ZPD) and achieve their goals.

Participants

The study was comprised of two categories of participants: instructors and learners. The instructors were recruited from among faculty and graduate students at a large Midwestern university who were native English speakers interested in teaching English as a foreign or second language online. One graduate student was identified who has
experience teaching English as a foreign or second language in both classroom and web-based contexts. One adjunct instructor who has been teaching English writing for six years at another Midwestern university was also selected to teach the spoken English instruction. Two graduate, one was a doctoral student majoring instructional technology, and the other was taking political science master degree, were first time teachers online of spoken English instruction. All instructors were paid hourly for their instructional time.

In the beginning of the instruction program, there were 15 learners who voluntarily enrolled the class. 14 of 15 learners were full time employees from a government business and a private training institute in China, and one learner was an employee in a advanced technology company in Taiwan. Since English has been a core course in all high schools and colleges in China and Taiwan, the learners who attended the class in this study had been learning English as a foreign language for many years. However, they were not fluent in spoken English. Most of them attended class regularly, but some of them had to prolong their work or be assigned for business trips travel to another location without the internet connection available. There were 8 learners dropped out and could not accomplish learning at last.

The Settings

Since the study involved web-based spoken English instruction, all participants used a broadband Internet connection (e.g. cable, DSL, ADSL) or a wireless connection on campus or at home. They used a desktop or a laptop computer which can effectively support audio and video functions. The ideal configuration of equipment had been tested
and suggested in a previous exploratory study (Lee et al., 2007). All participants accessed the online class through the high speed Internet connection at college, and if not, they were required to use an effective connection (e.g. wireless connection) without simultaneously operating many programs on the computer, or sharing a connection with other people with a router. The physical environment was expected to be a quiet area without interruptions to their teaching and learning. All classes were delivered online through both Skype and Adobe Connect depending on the curriculum and learning activity. Moodle was the course management system allowed instructors to organize and manage courses, post announcements, upload teaching materials, and set up learning activities.

In addition to the physical environment and the Internet connection, the specific programs listed below were adopted for this study:

1. Skype – a business collaboration tool and SCMC system that was adopted for this study because of its popularity and potential for telecommunication all over the world. The system required all participants in this study to download software and set up an account on their own computer. It provided point-to-point connections through the Internet and multi-function features, such as text messages, audio, video, and chat conferencing. This tool had been using for synchronous communications but also for supporting delivery of asynchronous text messages before the study. In this project, instructors and learners communicated through Skype and Adobe Connect to accomplish synchronous teaching and learning activities.
2. Moodle – a course management system (CMS) that provides free, open resources for instructors to enrich interactions through distinctive modules such as Forum, Blogs, Chat, and Survey. For this study, instructors uploaded the syllabus, teaching materials, assignments, or announcements on Moodle. Learners could then access this material by logging in to their account and could post their comments and submit journals or assignments. Moodle allowed flexibility for learners in reviewing their lessons.

3. Adobe Connect— a web communication system that supported web communication through both audio and video functions in this project. All participants were not required to download software before using it. Instead, they could simply access the meeting or training through a URL that the instructors created. The system provided a variety of custom pods that facilitate active collaboration for more effective and engaging web instruction. All participants could also take advantage of training, event, and presenter modules to engage in the online, real time instruction.

Methodology

The purpose of this study was to investigate the experiences of instructors and learners in implementing a real-time, online spoken English instructional program. The study adopted a qualitative case study methodology in order to enhance the understanding of SCMC language learning and provide an in-depth investigation of the experiences of participants. Merriam (1998) pointed out that “qualitative research is an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of
social phenomena with as little disruption of the natural setting as possible” (p. 5). It is concerned “with experience as it is ‘lived’ or ‘felt’ or ‘undergone’” (Sherman & Webb, 1988, p. 7). According to Patton (1985), qualitative research is an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting….The analysis strives for depth of understanding. (p. 1)

Stake (1995) regarded a case study as its end product. Merriam (1988) explained Stake’s view and pointed out that “[a] qualitative case study is an intensive, holistic description and analysis of a single instance, phenomenon, or social unit” (p. 21). More specifically, Merriam clarified that a case can be a training program, a person, a specific regulation, or an exact region. Namely, a case study “concentrate[s] attention on the way particular groups of people confront specific problems, taking a holistic view of the situation. They are problem centered, small scale, entrepreneurial endeavors” (Shaw, 1978, p. 2).

A case study can be defined by its characteristics: particularistic, descriptive, and heuristic. According to Merriam (1998), particularistic case studies will disclose the events, situations, and phenomena of particular cases, as well as what they might represent. A descriptive case study can provide an abundant description of the situation, event, or phenomenon being studied. As for heuristic case study, it can clarify the phenomenon of the case and help readers to extend the understanding of the phenomenon
to uncover new meaning. Olson (1974, p. 139) listed some aspects for the heuristic quality:

1. Explain the reasons for a problem, the background of a situation, what happened, and why.
2. Explain why an innovation worked or failed to work.
3. Discuss and evaluate alternatives not chosen.
4. Evaluate, summarize, and conclude, thus increasing its potential applicability.

This study is a heuristic case study which is expected to accomplish the following goals:

1. Illuminates the reader’s understanding of whether the SCMC system is an effective method for spoken English training.
2. Outlines what competencies an instructor should have for the online spoken English teaching.
3. Provides assistance for instructors on how to deliver an online training program and how to design curriculum and activities.
4. Explains how the curriculum influences learners’ learning.
5. Explore instructor’s perspectives on online instruction.
6. Reveals learners’ perceptions of online learning.

Most importantly, the study provided an innovative model for real-time, online spoken English instructional program that might be applicable in other contexts.

The sources of data in this study were semi-structured in-depth interviews of instructors and learners, participant observations, and course evaluations. The semi-
structured, in-depth interviews were conducted to understand both instructors’ and
learners’ experiences with real-time, online spoken English teaching and learning.
Through the descriptions of participants, the researcher learned how they facilitated and
learned online in a situated context. The perspectives of learners regarding instruction
and curriculum were collected and analyzed through a course evaluation after the
instructional program. The instructional activities were observed to witness firsthand the
successes and problems experienced by the instructors and learners.

Significance of the Study

Synchronous communication with native speakers is critical to improve learners’
fluency in a language. The SCMC technology permits rich interactions and
communications to occur regardless of geography. This case study extended our
understanding of how to use this innovative technology effectively in the teaching and
learning of spoken English. Learning from the instructors and learners in an authentic
instructional program not only provided a better understanding of the nature of using the
SCMC system in language education, but also identified the challenges that needed to be
overcome in such a instructional program.

In addition, online instructors’ experiences of how to effectively integrate
technology with curriculum were a critical factor affecting instruction and assistance in
the achievement of learners’ goals. Based on Vygotsky’s ZPD theory (1978), learners’
learning and development are interrelated from their first day of life. They need
guidance from adults or peers mediated by language through social activities in order to
achieve their learning goals. There is no doubt that the instructors’ experiences
including pedagogical, communicative, technical, and personal domains will highly influence learners’ learning. For example, the advent of innovative technology demands that instructors have higher skills and rich knowledge in the integration of technology with instruction to improve their teaching and to benefit learners’ learning. In this study, through observing instructors’ teaching and their sharing of experiences in the interviews, the essential competencies of an online spoken English instructor were extracted.

Moreover, a well-designed curriculum that promoted effective online spoken English teaching and learning was stemmed from the experiences of the instructors and learners as well as the observations of the instructional activities. How those instructors delivered instruction based on instructional design strategies and learning theory and how they facilitated the learning activities in the real-time, online context could be a model for the use of an SCMC system in spoken English instructional program across the world.

The study furthered previous related research and suggested a theoretical framework (theoretically and practically) for the professional development of instructors who will teach English in a real-time, online environment.

Limitations and Delimitations of the Study

The research was limited in several ways. First, the study depended on motivated participants. The instructors were recruited from faculty and graduate students who were native speakers of English and were interested in teaching online. The instructors may have limited prior experience, motivation with for web-based language teaching.
In addition, the technology itself could be a limitation. Although the communicative systems, Skype and Adobe Connect, included audio and video, the quality of transmission might be a factor which would affect the users’ attitude and satisfaction. Limited bandwidth might cause interruptions and delays of sound and images on both sides. Although Skype’s audio quality is similar to the phone, it is not the same as talking to someone face-to-face. The quality of the audio might hinder the learners’ listening comprehension, especially their comprehension in a foreign language.

The qualitative case study, along with other methods, could be discussed in terms of strengths and limitations. The researcher’s sensitivity and integrity might affect the process and final product of data analysis. The researcher’s efforts and instincts were also factors in conducting the study. Therefore, how to avoid bias in the process of the study, how to proceed with an interview and observation, how to analyze data, and how to enhance the reliability and validity should be cautiously considered by the researcher (Merriam, 1998). The case study focused on a unique phenomenon or situation which did not attempt to be generalized to other studies; however, the results might be transferable to other settings and to other participants. Its implications and recommendations, in fact, could serve other parties interested in using SCMC for language teaching and learning.

Definitions of Terms

**CALL**: Computer-assisted language learning refers to the application and study of the use of computers in language teaching and learning, such as instructional software, multimedia activities, e-learning, distance education, and web-based learning. It also refers to pedagogical strategies to integrate computers into the language curriculum.
**CMC**: Computer-mediated communication (CMC) was coined by Hiltz and Turoff in 1978 to refer to computer conferencing. It now refers to all electronic communication between learners and instructors through a computer. It can involve both asynchronous text-based communication (e.g. e-mail, discussion board, listserv, and bulletin board) and technologies using synchronous communication combining text, audio, and video (e.g. Skype, Blackboard, and Adobe Connect).

**SCMC**: Synchronous computer-mediated communication is a real time, online telecommunication system which combines text, audio and video functions so that interlocutors can communicate and interact with each other through a computer and the Internet.

**Online**: A term referring to the period when a computer is linked to a server connected to the Internet.

**Real-time**: Taking place in the current time frame; synchronous time.

**Video conferencing**: The video equivalent of a telephone conference call using a digital video camera.

**CLT**: Communicative language teaching approach regards language as a functional system which is used for communication. The central concept and goal of CLT is communicative competence which enables learners to use language appropriately and correctly in the real life situations. In CLT classroom, the teacher serves as more of a facilitator to provide real-life materials and situations for learners to engage in learning activities. The learner is supposed to be in charge of their own learning to practice
different social and situational contexts of communication in real life. It is a learner-centered environment.

**ZDP:** A term first used by Vygotsky. Zone of proximal development is variance between what children can do with assistance by adults and what they can do without assistance from adults.
CHAPTER 2: LITERATURE REVIEW

Introduction

This chapter reviewed critical theories and research literature supporting this study. The first section depicted the theory and application of computer-assisted language learning (CALL) and described a foreign language learning (FL) and second language acquisition (SLA) theory -- the communicative language teaching approach (CLT). The CLT approach provided a better understanding of how students learned and improved communication competence and how teachers delivered instruction based on the CLT approach in the typical classroom environment. The second section introduced Vygotsky’s sociocultural theory and its application in language learning. The third section described the use of synchronous computer-mediated communication (SCMC) for language learning including the significant features, strong and weak points, rationale, and challenges.

Computer-Assisted Language Learning

Computer-assisted language learning (CALL) has emerged and progressed remarkably during the last three decades. The rationale of rich and diverse CALL currently is due to the advent of technology that has made CALL possible to meet the needs of foreign and second language learners in different contexts (Levy & Stockwell, 2006). The invention of new technologies motivated researchers and practitioners to explore the significance of CALL in foreign language learning (FL) and second language acquisition (SLA). Furthermore, the technologies used in CALL have not only altered pedagogy and its environment, but also the paradigms of FL and SLA. In the 1970s, the
computer was simply used as a substitute for a teacher to provide students teaching materials to practice drills repetitively and mechanically by themselves. Nowadays, technologies are used as communication tools which can provide a means for using language more effectively and allow students to engage in communicative tasks in authentic and diverse contexts.

Theory and Application of CALL

The application of CALL was undergone a succession of theories of foreign and second language acquisition: from behavioristic CALL, communicative CALL to integrative CALL. (Warschauer & Healey, 1998). From the 1950s to the 1970s, CALL was based on behavioral learning theory focusing on a drill and practice learning model in which the computer was regarded as a tutor (Taylor, 1980) delivering teaching materials to students, such as vocabulary drills and brief grammar explanations. Therefore, during this period of time, people regarded the computer as a supplement to classroom instruction and learning. The rationale for the use of computers during this time includes: (1) repeatedly presenting the same material to students can be a major benefit for their learning; (2) the computer, unlike a teacher, can implement drills repeatedly and give feedback immediately; and (3) the computer can allow students to learn at their own pace (Warschauer, 1996). This rationale is still applied to today’s numerous drill programs such as vocabulary and grammar exercises. However, by the 1980s, several researchers criticized this approach at both the theoretical and the pedagogical level (Ahmad, Greville, Rogers, & Sussex, 1985; Higgins & Johns, 1984; Underwood, 1984). For example, critics said that CALL courseware and activities could
not optimize intrinsic motivation, pointing out the lack of interaction between learner and computer. Furthermore, the introduction of the microcomputer allowed for new, additional possibilities.

Since the 1970s, communicative CALL was developed on the basis of the cognitive theories which stressed that learning is a process. According to communicative CALL, computer-based learning activities in second language acquisition (SLA) should focus on the use of forms rather than on the forms themselves. Underwood (1984) proposed premises for Communicative CALL which included the following crucial points:

1. The activities will focus more on using forms to communicate rather than on the forms themselves.
2. Grammar will always be implicit rather than explicit.
3. Communicative CALL will encourage the student to generate original utterances rather than merely to manipulate prefabricated language.
4. Communicative CALL will not try to judge and evaluate everything the student does.
5. Communicative CALL will avoid telling students they are “wrong.”
6. Communicative CALL will not try to “reward” students with congratulatory message, lights, bells, whistles, or other such nonsense.
7. Communicative CALL will create an environment in which using the target language feels natural, both on screen and off. (p. 52-54)

CALL programs that embodied these principles were developed and used during this period of time. Non-drill format programs included courseware for paced reading,
text reconstruction, and language games. The programs extended the computer beyond a tutor model, a “teacher in the machine” (Levy, 1997). The new model used for communicative activities involved the computer as a stimulus (Taylor & Perez, 1989). This software was based on a cognitive model of language acquisition intended to stimulate students’ motivation, critical thinking, creativity, and analytical skills. It encouraged students to become active learners. Moreover, communicative CALL involved the computer as a tool (Brierley & Kemble, 1991; Taylor, 1980) or workhorse (Taylor & Perez, 1989). For example, learners could take advantage of word processors, spelling and grammar checkers, and concordances to use or understand language.

By the 1990s, integrative CALL emerged and focused on the use of multimedia, computers, and the Internet for language learning in authentic social contexts. Learners participated in task-based or content-based learning activities to integrate and use speaking, listening, reading, and writing skills. “Much of the theory underlying integrative CALL is derived from the Vygotskyan sociocultural model of language learning” (Fotos & Browne, 2004, p. 6) in which interaction plays a central role in the creation of meaning. Integrating learning activities that represent holistic person-to-person interactions include e-mail, MOOs (multiple-user-domain object oriented environment), role-playing games, and simulation games. Learner autonomy is a substantial goal in the integrative view of CALL (Healy, 1999). In recent years, language-learning software and CD-ROMs have been replaced gradually by web-based activities.
In summary, the development of CALL has undergone three successive stages over the past 50 years: tutor, stimulus, and interaction. However, Bax (2003) criticized the three stages and suggested instead an alternative way to analyze CALL. Bax argued that CALL is now in the stage of Open CALL instead of Communicative CALL. In this stage, the computer is used for genuine communication. Bax also suggested that normalization and integrated CALL be the end goal for CALL. He believed that teaching is invisible and embedded in daily practice. Unlike pens and books that have been thoroughly adopted in the classroom, computers are not integrated into the curriculum of all classes. That is, CALL has not achieved the normalized stage. Although Bax argues for three new categories for how technologies should be used for CALL, he has not clarified the theoretical framework for the three categories.

In addition to the broad view of CALL theory, a rich variety of paradigms have been adopted in CALL (Kramsch, 2000): (1) Chapelle (1997) suggested that CALL be grounded in instructional SLA theory. She argued that CALL research needed a specific approach to improve the design and pedagogy of CALL. (2) Egbert (2005) suggested that multiple theoretical perspectives are crucial for the rapid shift because the use of technology is expanding in different social and cultural contexts, because the development of CALL pedagogy is ongoing, and because of the diversity issues involved in the use of technology. (3) Kern (2006) concluded that “[g]iven the complexity and diversity of goals, contexts, and problems in CALL research, a one size fits all approach will not work” (p. 187-188).
Teacher Preparation for CALL

In recent years in second language acquisition (SLA) and foreign language learning (FL), language teachers have been argued the value of using technology in language teaching. They found that enhancing the use and knowledge of CALL is essential to ensure effectiveness of instruction (Warschauer & Healey, 1998). However, preparation programs for pre-service and in-service teachers seem to have been ignored in language graduate programs and professional development in colleges (Kessler, 2006). He pointed out that the most critical problem with the use of technology in language teaching is the deficiency of proper training for language teacher preparation.

Some studies on language teachers’ training with CALL include: electronic communication (e.g. email, discussion boards, file sharing) (Grau, 1996), use of the Internet (e.g. computer-mediated communication, course management system) (Fotos & Browne, 2004), and advanced skills (e.g. video teleconferencing, Weblogs) (Son, 2002). Slaouti and Motteram (2006) studied graduate teachers’ perceptions of professional development (PD) for information and communication technology (ICT) and language teaching and learning. Four core technology modules were designed for the PD:

1. Computers and video in the language classroom (CVLC): focuses on teachers’ experiences with how basic technology such as wordprocessors, the Internet, or applications integrates with their language teaching contexts and practice.

2. Computer assisted language learning (CALL): highlights the development of teachers’ skills to use computers to design teaching materials for learning tasks.

3. Multimedia in language education (MLE): furthers teachers’ skills in video
content and different tools within online learning environment.

4. Computers, language and context (CLC): encourages teachers to consider how technology changes instruction and their roles within a technology-rich environment.

The focus on teachers’ PD above primarily relates to enhancing or improving teachers’ skills in learning new technology. However, it is unreasonable and unnecessary to cover all technologies and skills in a training program for teachers (Levy, 1996). A language teacher who is in command of all technologies might not be able to effectively incorporate them into instruction if he or she does not understand how to integrate them into teaching and learning. Therefore, Northrup and Little (1996) suggested that instructional technology should be a critical part in both teacher preparation program and professional development.

For this concern, a study focusing on pedagogic content knowledge by Shulman (1986) provided a taxonomy as framework for consideration of language teacher education and information and communication technology (ICT) in CALL. The framework includes:

1. Content knowledge: understand how to adopt major paradigms such as behaviorism, communicative approach, and constructivism for pedagogy and learning with ICT.

2. General pedagogical knowledge: explore the approaches to visually and physically integrate and manage ICT in teacher’s classrooms.

3. Curriculum knowledge: consider how to integrate ICT and resources into the
curriculum.

4. Knowledge of learners: regard learners as a major factor affecting the pedagogical methods with ICT.

5. Knowledge of educational contexts: explore the impact of the technology infrastructure and physical environment on pedagogy and learning.

6. Knowledge of educational ends: consider the philosophical and moral issues in the use of technology in teaching and learning.

This framework provides a link between pedagogy and technological skills in CALL. Further, how to balance development of technology knowledge and skills with pedagogy should be a focal point for both pre-service and in-service language teacher training. Kessler (2006) offered four recommendations: “involve a specialist, involve all stakeholders, provide incentives, and keep use relevant” (p. 34-35). A CALL specialist should be involved as a resource for a language teacher preparation program. In addition, an introduction of substantial principles and applications to CALL should be covered at levels of teacher preparation. As for the stakeholders including principles, administrators, and staff, they are those who should be involved in the CALL activities of language programs. Consequently, all preparation teachers can acquire positive responses and support from stakeholders to make technology resources available in teacher training. As for the pre-service teachers, the importance of CALL should be emphasized within the training. For in-service teachers, they need extra time, respect, financial support, and recognition. Finally, a CALL trainer should always keep project-based learning or collaborative teamwork in CALL on mind in teacher training to benefit both pre-service
and in-service teachers. Consequently, all both pre-service and in-service teachers can apply what they learn with technology to their classes.

In the present study, the researcher developed the curriculum and lesson plans for the training program based on both CLT approach and sociocultural theory. The purpose of the multiple theoretical frameworks was to provide an alternative approach to identify better principles which fit into CALL research, application, and teacher preparation. In the next section, the researcher reviewed the fundamental principles and application of CLT in foreign language teaching and learning.

Communicative Teaching Approach in Foreign Language Learning and Second Language Acquisition Classrooms

The communicative language teaching approach (CLT) is based on the viewpoint that language is a vehicle for interlocutors to interact and communicate with other people through transforming, interpreting, and internalizing voices, symbols, or signs. In CLT, language is communication, a functional system to convey meanings between communicators. In foreign language or second language classrooms, language learning happens through interactions and communications between teachers and students, and between students and students. The classroom provides a communication context for students to gain communication competencies which enable them to communicate effectively and appropriately in social contexts. Therefore, the aims of CLT are to enhance students’ communication competencies and to provide procedures for language teachers who have a better understanding of the interdependent relationship between
language and communication to teach listening, speaking, reading, and writing skills (Liao, 1991; Richards & Rodgers, 1986).

Some characteristics have been identified and used for defining CLT. Richards and Rodgers (1986) pointed out that language provides a functional system to convey meaning through communication and interaction between communicators. They assert that language is for functional and communicative uses which emphasize the importance of the meaning in discourse rather than “its grammatical and structural features” (Savignon, 1991, p. 262). All tasks and activities designed and implemented in CLT classrooms support communicative intent to provide students more opportunities to practice how to communicate effectively and appropriately in different contexts (Larsen-Freeman, 1986). Engaging in different activities, students take advantage of authentic materials offered by teachers to practice how to negotiate meaning rather than learn grammatical patterns (Dubin, 1995; Widdowson, 1996). Through meaningful and authentic communication, students can understand the exact usage of language by native speakers (Canale & Swain, 1980). Berns (1990) summarized the following characteristics of the CLT approach:

1. Language teaching is based on the view of language as communication; that is, language is seen as a social tool which speakers use to make meaning: speakers communicate about something to someone for some purpose, either orally or in writing.
2. Diversity is recognized and accepted as part of language development and is used similarly with second language learners and users as it is with first language users.

3. A learner’s competence is considered in relative, not absolute, terms of correctness.

4. More than one variety of a language is recognized as a viable model for learning and teaching.

5. Culture is recognized as playing an instrumental role in shaping speakers’ communicative competence, both in their first and subsequent languages.

6. No single methodology or fixed set of techniques is prescribed.

7. Language use is recognized as serving ideational, interpersonal, and textual functions and is related to the development of learners’ competence in each.

8. It is essential that learners be engaged in doing things with language, that is, that they use language for a variety of purposes in all phases of learning. (p.104)

These characteristics reflect that in foreign language learning (FL) and second language acquisition (SLA) classrooms, teachers should provide opportunities for students to express, interpret, and negotiate meaning through communication and interaction. Teachers should also recognize that classrooms are a unique communication context where students can comprehend the meaning of communication and shape the structure of communication during their participation in activities.
Teaching Communicative Competence

In the early behaviorist stages, foreign language learning (FL) and second language acquisition (SLA) approaches in the classroom focused on learning vocabulary, idioms, and grammar through mechanical approaches such as recital and drills. However, rich knowledge of words and structure of language cannot guarantee students’ effective and appropriate communication with other people in the classroom or in real life. Chomsky (1965) argued that a cognitive approach to develop students’ competence in the acquisition of grammar (which are forms or structures in language) may help students understand and use language more appropriately. He claimed that “language is a tool for thought” (Chomsky, 1992b, p. 49), rather than a tool for communication. To know a language is to learn a mentally represented rule, structure, or grammar. Through the acquisition of rules, the deep meanings of utterances can be comprehended by interlocutors. Therefore, if individuals can learn the rules of language, they can analyze its deep meaning. In contrast to Chomsky’s view on competence as an abstract system of rules, Hymes (1972) claimed that in order to use language effectively, learners should develop their communicative competence because language involves “more than knowing a set of grammatical, lexical, and phonological rules” (Hiep, 2007, p. 193). Hymes argued that communicative competence should include both the knowledge and the ability to use language appropriately and acceptably.

Savignon’s interactional approach (1983) viewed language as meaning making. To know about the form of language is also to know how to produce meaning. Therefore, Savignon argued that the aim of language teaching is to develop students’ communicative
competence defined as “the expression, interpretation and negotiation of meaning involving interaction between two or more persons or between one person and a written or oral text” (p. 249). Savignon’s viewpoint supports Hymes’s concerns with language use as a meaning-making activity. However, Hymes is unconcerned with the form of communication in the social dimension of language. This view differs from Halliday’s approach to linguistic interaction. Halliday (1978) disagreed with the necessity for the introduction of the term communicative competence. Instead, he argued that the term separates the form of language from social context. Halliday explained that “[i]f we are concerned with ‘what the speaker-hearer knows,’ as distinct from what he can do, and we call this his ‘competence’, then competence is communicative competence; there is no other kind” (p. 92). He asserted that “knowing how to use language is the same as knowing what one can do with language” (cited by Berns, 1990, p. 31).

Canale and Swain (1980) synthesized various perspectives to develop a framework for defining communicative competence, including grammatical competence, sociolinguistic competence, discourse competence, and strategic competence. Grammatical competence emphasizes the knowledge and skills in producing the correct form of sentences and discourses. Such competence is the requirement for communicators to accurately and literally express meaning of utterances. Sociolinguistic competence refers to the appropriate use of language in various social contexts. Speakers should understand the purpose, subject, and topic of communication and interaction. As a result, they can appropriately express and convey their meaning (based on both correct patterns of language and different contexts) to the receivers.
Discourse competence involves the ability of understanding and identifying various forms of utterance to connect discourse to an overall theme of communication. It also involves “the ability to infer the meaning of large units of spoken or written texts” (Berns, 1990, p. 89). Savignon explained that these units of texts are achieved through cohesion in form and coherence in meaning. Cohesion deals with how utterances are linked structurally to facilitate interpretation of a text. Coherence refers to the relationship among the different meanings in a text where meanings may be literal meanings, communicative functions or social meanings. (p. 263)

Strategic competence refers to knowing how to enhance the ability to communicate effectively or how to compensate for communication breakdowns due to insufficient knowledge and competence or other factors (e.g., fatigue, inattention).

_The Role of Teachers and Students in CLT Classrooms_

Classrooms can provide an authentic social context for students to practice how to communicate appropriately and how to comprehend the meaning of discourse in different contexts. Mehan (1979) argued that “students need to know with whom, when, and where they can speak and act, they must have speech and behavior that are appropriate for classroom situations and they must be able to interpret implicit classroom rules” (p. 33). Students and teachers share understandings with each other depending on how students interpret teachers’ expressions and communicative behavior to develop patterns of classroom communication. In communicative language-teaching classrooms, most students learn how to appropriately communicate and interact with other peers by
practicing activities, using authentic materials, and also modeling the teacher’s communicative behavior.

Cook (1991) supported Mehan’s viewpoints:

[S]tudents are not required to produce substantially errorless speech in native terms. Instead they use whatever forms and strategies they can devise to solve their communication problem, ending up with sentences that are entirely appropriate to their task but are often highly deviant from a native perspective. (p. 140)

Overemphasizing the correct use of form in language will often produce breakdowns to inhibit students’ communication and fluency. Therefore, teachers should encourage students to actively negotiate meaning through face-to-face interactions. Eventually the students will learn communicative competence simply by communicating.

Foster’s research (1998) on learner-learner interaction in real classroom conditions conclusively supports the need for rich meaning negotiation between teachers and students. According to this view, students are regarded as negotiators in the process of learning. Breen & Candlin (1980) pointed out that the role of negotiator between the self, the learning process, and the object of learning emerges from and interacts with the role of joint negotiator within the classroom procedures and activities which the group undertakes. The implication for the learner is that he should contribute as much as he gains, and thereby learn in an interdependent way. (p. 110)
As a result, students are the center of the classroom and should be thoroughly responsible for their learning. They must have positive attitudes toward learning and adopt appropriate approaches to learning (Richards, 1990).

Since students no longer play a passive role in the classroom, the teacher does not continually dominate the classroom. “Rather the teacher takes one step back and lets the students take over their activities, making up their own conversations in pairs and groups, learning language by doing” (Crook, 1991, p. 140). The teacher is a manager of classroom activities (Larsen-Freeman, 1986), a counselor (Richards & Rodgers, 1986), a co-communicator (Breen & Candlin, 1980; Littlewood, 1981), and a motivator and evaluator (Savignon, 1991). These interpretations of the role of a teacher indicate that the responsibilities of a teacher are to establish and organize the classroom as a rich communication environment. Consequently, students can improve their communicative competence and practice communication with their peers and the teacher in real-life situations. Teachers are counselors to mesh students’ intentions and interpretations to augment communication, to monitor students’ errors during communication, and to help students to solve problems. Teachers introduce and demonstrate how to do activities and participate in students’ groups to motivate and encourage students to be active communicators.

Littlewood (1981) suggested that the role of teachers in communicative activities no longer be dominant; however, their role would still be important. For instance, teachers should monitor students’ strong and weak points of communication during activities without intervening. Teachers could help students by providing critical
language items and advice to guide and support them in accomplishing activities. Conversely, Li (1984) investigated the role of teachers in traditional foreign language classrooms and found a significant discrepancy in the role of teachers in communicative classes. In China, teacher-centered approaches can be seen frequently in the classroom. Consequently, most teachers who were used to the traditional teacher-centered approach, in Li’s CLT-based language learning project, often felt “guilty” because they “[had] nothing to do in class and [didn’t] think they [were] doing their duty” (p. 10). However, a teacher’s job is to create a situated environment which can help students to process their learning consciously, rationally, and structurally.

Gatbonton and Segalowitz (2005) pointed out three roles of teachers in the language classroom: facilitator, monitor, and knowledge provider. They claimed that their Automatization in Communicative Contexts of Essential Speech Segments (ACCESS) method regarded teachers as facilitators and monitors. Teachers should plan activities and make the whole process go smoothly. Additionally, they should always pay attention to students, keep them on task and monitor their learning progress. The role of the teacher in ACCESS differs from the role of the teacher in traditional classrooms in which teachers are knowledge providers and students passively receive knowledge from their teachers.

In student-centered CLT classrooms, it is necessary for teachers to develop curriculum based on appropriate instructional strategies to promote a communicative and interactive classroom environment. In this environment, students participate in activities
and tasks to practice and achieve real communication or to solve problems they encounter. Johnson (1983) supported this classroom environment:

If it is our intention to provide opportunities for students to communicate realistically in class, we have a responsibility to create an atmosphere in which communication is possible, one in which students can feel free to take communicating initiative and are motivated to do so. Making classes “student-centered” can contribute to creating such an atmosphere. (p. 74)

D’Anglejan’s summary (1978) provided an overview of the function of the teacher and learner in CLT:

[They must function as] equal partners in a cooperative enterprise. The learner must seek out the linguistic data and process it when he needs it and can assimilate it. It must be the learner and not the teacher who sets the pace. The role of the teacher is that of responding to the developing communicative needs of the learner by making the appropriate linguistic data available “on request.” If the focus of the second language classroom is to be on developing the learner’s ability to get the message across, then the teacher’s feedback must be related to the communicative appropriateness and not the linguistic form of the students’ utterances. (p. 231)

CLT Curriculum

As discussed above, the underlying elements of CLT include negotiation of meaning, communicative competence, social context, learner-centered approach, small group learning, communicative activity, and authentic materials. Determining how to
involve these elements in curriculum and learning activities has been a critical issue for FL and SLA teachers.

Savignon (1983) proposed five components based on her interpretation of communicative competence for a second language learning curriculum in a CLT environment:

1. Language arts: focusing on the rules of usage, an explanation of how language works, and the systematic practice in the application of rules.

2. Language for a purpose: emphasizing authentic use of language in the classroom rather than the formal structures of language to express the meaning between individuals.

3. Personal second language use: relating to or involving individuals’ own attitudes, values, and affective feelings to express their own perspective on the events of the world and their culture.

4. Opportunities for use of language: providing students opportunities to use grammatical discourse to interact with society.

5. Language beyond the classroom: providing students with opportunities to use language outside of the classroom to interact with the community and to immerse themselves in other cultures.

Savignon’s proposal was based on her interpretation of communicative competence: “the expression, interpretation, and negotiation of meaning involving interaction between two or more persons or between one person and a written or oral
text” (p. 249). However, this proposal was developed to “help learners develop general language competence rather than specific areas of language use” (Berns, 1990, p. 92).

Stern (1981) proposed four major syllabi of the foreign language curriculum: the linguistic, the cultural, the communicative, and the general language education syllabi. Stern indicated that the multi-dimensional curriculum balances the weight of emphasis and provides a more systematic approach to culture, communication and language education. The communicative syllabus highlights the practice of language use and the communicative aspect of language rather than the form of language. Students are encouraged to use language by engaging in activities in their authentic communication context. Most importantly, students learn strategies to express their meaning in different situations and learn knowledge through communication and interaction.

In contrast to Stern’s views on curriculum design, Yalden (1983) proposed a relative approach relying on the principle of balancing form and function of communication. Yalden argued that there should be a focus on form prior to function in a low-level course. In an intermediate level course, both form and function should be focused on equally. Therefore, both form and function can be combined together in the process of learning to allow students to develop communicative competence exponentially. Yalden’s approach can also connect to general language education content and cultural content which prepare students for mastery from form to function and for the interdependence of both form and function on cultural reality and context.

Lange (1987) reviewed definitions of curriculum in language learning and concluded that curriculum constitutes content, process, and instruction. Content directs
curriculum to determine the outcomes of competence that students are expected to achieve. Process includes methods and steps that instruction should follow. Instruction refers to the interaction between the student and the teacher, with the curriculum and with the environment where instruction happens.

**CLT Activities**

Richards and Lockhart (1994) defined activity “…as a task that has been selected to achieve a particular teaching/learning goal” (p. 161). Nunan (1991) pointed out that a communicative task is a critical component within curriculum planning, implementation, and evaluation:

In task-based language teaching, syllabus content and instructional processes are selected with reference to the communicative tasks which learners will need to engage in outside the classroom and also with reference to theoretical and empirical insights into those social and psycholinguistic processes which facilitate language acquisition. (p. 279)

CLT emphasizes that language should be learned through use and communication. Thus, communicative activities should provide students with more opportunities to “develop links with meaning that will later enable [them] to use this language for communicative purposes” (Littlewood, 1981, p. 8). The purpose of these activities is to foster students’ communicative competence. According to Littlewood, communicative activities achieve the following purposes in the classroom:
1. Provide whole-task practice: Through various sorts of communicative activity, students can learn speaking, listening, reading, and writing skills rather than part-skill to implement various sets of skilled performance.

2. Improve motivation: Engaging in activities can motivate students to communicate with other peers and help them assess whether they have achieved their learning goal.

3. Allow natural learning: Communicative activities should provide a natural context for students to use language for communication with others.

4. Create a context which supports learning: Communicative activities provide opportunities for students to participate and build positive relationships among other learners and between learners and teacher.

There are many kinds of communicative activities based on different linguistic views. Littlewood proposed functional communication activities focusing on the appropriate use of language in any situation, and social interaction activities emphasizing appropriate application in a wider variety of social situations. Paulston and Bruder (1976) pointed out two other kinds of communicative interaction activities depending on the teaching point. One activity provides learners with exercises to communicate referential meaning in the target language, which is called exercises in communicative performance. The other kind of activity allows learners to get their meaning across in a socially acceptable way, including culturally relevant information—social interactional rules. They suggested four fundamental types of communicative activities: social formulas and dialogue activity, community-oriented tasks, problem-solving activities, and role plays.
Social formulas and dialogue activity allow learners to appropriately establish and maintain social relationships by using the proper speech acts such as greetings, partings, and introductions. Community-oriented tasks provide opportunities for learners to interact with native speakers outside of the classroom. In problem-solving activities, teachers present a problem with varied solutions to learners who select and present the best solution to the problem. Problem-solving activities often involve group work in order to allow learners to work on collaborative learning. Finally, in role play activities, learners are assigned a specific role “from which he [or she] has to improvise some kind of behavior toward the other role characters in the exercise” (p. 83). Paulston and Bruder suggested that role play be improvised and fictitious. They should not be scripted, so learners could practice communication in simulated, real-life scenarios.

In Sullivan’s (2000) study on playfulness as mediation in communicative language teaching, the role of play is regarded as an activity to transit learners’ zone of proximal development. Through the playfulness of oral narrative activity, learners interact and communicate with teachers and other learners to practice negotiation of meaning and co-construct knowledge together. From this viewpoint, the CLT and sociocultural theory are compatible with each other to provide a holistic paradigm for curriculum design and development of learning activities in the present study.

**Summary**

CLT emerged as an alternative theory and approach focusing on form and structural function in foreign and second language acquisition. CLT holds that language
should be learned on the basis of communication in which the negotiation of meaning takes precedence over grammar and structure. As a result, the role of students and teachers has dramatically changed. The student is the center of the classroom; the teacher’s role is to facilitate, monitor, and support students in the process of learning. Through the use of language, students positively engage in communicative activities with authentic material and simulated contexts to foster their communicative competence. Therefore, they learn to communicate effectively and appropriately in the CLT classrooms and in different contexts.

Vygotsky’s Sociocultural Theory

Sociocultural theory proposes that people use language and other symbol systems as mediation to their activities in the social contexts. The theory explains the dynamic interdependence of social and individual processes and how humans use language to mediate activities, to construct knowledge, and to achieve their goals. Many pedagogical concepts (such as activity theory, scaffolding, and zone of proximal development) are derived from the theory and have been applied to foreign and second language learning.

Sociocultural Theory and Application in Foreign and Second Language Learning

In his sociocultural theory, Vygotsky (1978) proposed that humans use language to communicate with other people to share experiences and to construct knowledge from those people in a society. Vygotsky argued that the developing individual needs help with higher mental functioning development that can be gained from other people’s experiences through social interaction. That is, the mental development of an individual
can be accomplished with assistance from other people in society through interaction.

This viewpoint influenced foreign and second language learning theoretically and practically.

*Semiotic Meditation and Tools*

In a nutshell, semiotic mediation is how humans construct all facets of knowledge.

Mediation means understanding how human mental functioning is tied to cultural, institutional, and historical settings since these settings shape and provide the cultural tools that are mastered by individuals to form this functioning. In this approach, the mediational means are what might be termed the ‘carriers’ of sociocultural patterns and knowledge. (Wertsch, 1994, p. 204).

Vygotsky (1978) argued that humans indirectly act out the physical world through tools, symbolic artifacts, and labor activity to mediate and regulate their relationships with other people in order to construct knowledge.

Language, constituting symbols, signs and sounds and functioning as mediators, allows individuals to convey their thoughts to other people and to initiate their activities in the sociocultural environment. Furthermore, individuals use language to solve problems and improve their mental development through interaction with the world. The mediation concept is important for foreign and second language learning since any teaching material, such as textbooks, visual and audio materials, and classroom discourse patterns, can be potential mediators for students’ cognitive development and knowledge construction (Donato & McCormick, 1994). This mediation concept, the foundation of
sociocultural theory, provokes language learning by focusing on the social process and application (Appel & Lantolf, 1994; Hall, 1995a; Kramsch, 1993; Moll, 1994; Toohey, 2000; Warschauer, 2005); the metaphors of input and output in second language acquisition (Swain, 2000; van Lier, 2000); and collaborative and interactive learning between students and society: novice and experts (Donato, 2000; Engerstrom & Middleton, 1996; Ohta, 2000; Wells, 1999).

Zone of Proximal Development

Vygotsky defined the Zone of Proximal Development (ZPD) as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (1978, p. 86). Vygotsky argued that individuals take over complicated mental processes by themselves through the use of language as semiotic systems to interact with culture and to mediate their higher psychological functions interpersonally. This kind of psychological function which transitions in the child’s cultural development occurs first on the social plane, and then on the psychological plane. “[F]irst it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This function is equally true with regard to voluntary attention, logical memory, formation of concepts, and the development of volition” (Vygotsky, 1981a, p. 163). Within the interpersonal relations in society between the novice and the expert, concept formation and knowledge acquisition by the novice is dependent on the cooperation of the expert who can bring the novice from the intermental plane (social interaction) to the
intramental plane (thinking and performance). When the novice achieves the intramental plane, it means that the novices are capable of controlling their behavior and acting alone. Vygotsky deemed the shift as self-regulation, indicating that the novice can direct himself/herself to complete and solve tasks strategically without instructions or help from other people.

Aljaafreh and Lantolf (1994) investigated the effects of negative feedback on the microgenetic development of a second language among adults based on Vygotsky’s regulation and ZPD concept. They developed two criteria for the research: one criterion focused on students’ learning shift from other-regulation (help from the tutor and peers) to self-regulation which demonstrated that they were able to correctly use the target structure in all contexts. They argued that “learning is not something an individual processes alone, but is a collaborative endeavor necessarily involving other individuals” (p. 480). They concluded that feedback as well as other-regulation will be graduated and contingent in the ZPD. That is, students will move away from reliance on feedback from a tutor or other peers toward reliance on themselves. The study supports Vygotsky’s notion of ZPD that “the potential level of development varies independently from actual development and is more indicative of mental growth development than actual development” (p. 468).

McCafferty’s study (1994a) examined whether private speech plays a mediator role in second language learning and attempted to connect Vygotsky’s observations of the child’s use of private speech with its use by adult second language learners. McCafferty agreed that private speech (close to pure thought) evolves from the social plane to the
psychological plane which depends on learners’ interaction with caregivers and others and which is confirmed the achievement of children’s self-regulation. Furthermore, McCafferty found that “the use of private speech by children for mediational purposes is of obvious significance in extending the theory to adults and second language learning” (p. 433).

More research expands the ZPD concept and language learning to novice-expert interaction (Wells, 1998), collaborative interaction (Donato, 1994; Ohta, 1995; Swain & Lapkin, 1998), and use of gestures for the development of ZPD for language learning and teaching (McCafferty, 2002). Kinginger’s (2002) study focused on the interpretation of ZPD for foreign language teaching in the USA. Kinginger suggested three holistic interpretations of ZPD: skills interpretation, scaffolding interpretation, and metalinguistic interpretation. Skills interpretation provides a viewpoint of language learning as the development of skill, derived from two main characteristics of the ZPD. One is that learning tasks should be a little higher than learners’ current level of ability; the other one is adults or more skilled learners should mediate between the learners and the tasks.

As for scaffolding interpretation, ZPD serves to construct knowledge through learners’ interactions in social or classroom contexts. “Interactions where students participate in reaching the instructor’s pedagogical goal are identified as scaffolding, as constructing the ZPD, and therefore as good” (Kinginger, 2002, p. 254-255). For the metalinguistic interpretation, Kinginger cited Swain and Lapkin’s (2000) study on collaborative dialogue in second language learning based on Vygotskian constructs, including ZPD:
Collaborative dialogue is problem-solving and, hence knowledge-building dialogue. When a collaborative effort is being made by participants in an activity their speaking (or writing) mediates this effort. As each participant speaks, their ‘saying’ becomes ‘what they said’ providing an object for reflection. Their ‘saying’ is cognitive activity, and ‘what is said’ is an outcome of that activity. Through saying and reflecting on what is said, new knowledge is constructed. (cited by Kinginger, p. 255)

Kinginger argued that collaborative dialogue mediates second language learning and provides a better unit than input or output employed respectively for the study of language learning. In summation, Kinginger advocated the importance of the broader interpretation to “assist in furthering the agenda of communicative language teaching,…” (p. 257).

**Scaffolding and Collaborative Learning**

Derived from the zone of proximal development (ZPD) concept, scaffolding refers to the expert’s scaffolded assistance to the novice to help solve problems. The scaffold assists the novices in constructing the important components which they are unable to carry out. Six scaffolding functions are characterized by Wood, Bruner, and Ross (1976)

1. Recruitment: enlisting the learner’s interest in the task
2. Reduction in degrees of freedom: simplifying the task
3. Direction maintenance: keeping the learner motivated and in pursuit of the goal
4. Marking of critical features: highlighting certain relevant features and pointing out discrepancies between what has been produced and the ideal solution
5. Frustration control: reducing stress and frustration during problem solving

6. Demonstration: modeling an idealized form of the act to be performed by completing the act or by explicating the learner’s partial solution (p. 98)

Anton (1999) suggested that the metaphor of scaffolding should be valued in analyzing second language learning situations, though it was originally interpreted as child development interaction with adults in first language situations. “By looking at teacher-learner interaction from a sociocultural perspective, we can improve our understanding of the functions served by the communicative moves used by teachers to provide learners with effective scaffolded help within the ZPD during the negotiation process” (p. 315). That is, when learners negotiate meaning with teachers or peers, they will obtain scaffolded assistance such as questions, repetition, and gestures until the ZPD disappears. This learning situation promotes the concept of collaborative learning between learners and learners, and between the novice and the expert. Donato’s study (1994) proposes that collaborative work among language learners offers the same opportunity for scaffolded assistance as from experts. “Learners are capable of providing guided support to their peers during collaborative Learner 2 (second language) interactions in ways analogous to expert scaffolding documented in the developmental psychological literature (p. 51). Simply, learners need peers’ assistance to improve their communicative competence through collaborative learning. In the learning process, the learner and learner collaborative communications not only enhances their oral skills, but also motivates students to participate in speaking activity as a cognitive tool to construct their knowledge (Ohta, 1995; Platt & Brooks, 1994).
Activity Theory

Activity theory, evolved from Vygotsky’s sociocultural perspective on human development, addresses three levels of human activity occurring in social and cultural contexts: the level of motivation, the level of action, and the level of conditions (Leontievs, 1978). Simply, needs are the premises of motives; goals emerge when needs become motives. Motives can only be acknowledged by actions based on the goals. The actions are implemented under particular conditions through proper mediation. For example, learners’ needs in foreign language learning (FL) and second language acquisition (SLA) drive them to attend a school to improve their language ability, which is their goal. However, activities will be linked to different motives and actions by other observers. Some FL and SLA learners attend the school because they are eager to improve their language ability and to absorb knowledge. However, others may have different motives for attending a language class, such as a desire to be awarded a diploma for a job.

Another point is that actions are also implemented through appropriate mediational means. For example, some learners attend a speaking class and use textbooks, CD-ROMs, or video tapes to improve their oral skills; some learners interact with other people through online chat or face-to-face conversation. Obviously, mediation plays an important role to relate the three levels to one another. As for language, it serves as a symbolic mediation resulting from practical activity under sociocultural circumstances. Speakers dynamically control their environment; activities appear when speakers, settings, motives, and histories interact with each other. Consequently, this view gives
rise to Coughlan and Duff’s (1994) and Gillette’s (1994) research on the perspective of activity theory in linguistics.

Coughlan and Duff argued that second language learners would not perform the task in the same way as other learners when an experimental task is distributed to them because of distinct motives, actions, and conditions. This viewpoint implies that the outcomes of a task cannot be predetermined since individuals embrace their own motives, objectives and sociocultural contexts to determine their actions for the same task. Donato and McCormick (1994) clarified that activity theory “provides a framework for situating strategies use within the total context of an individual’s language learning activity” (p. 455).

Sociocultural Theory and Synchronous Computer-Mediated Communication

Vygotskian constructs including social interaction, negotiation of meaning, zone of proximal development, and scaffolding and collaboration are crucial concepts for the study of language learning in a Synchronous Computer-Mediated Communication (SCMC) context. The following sections discussed how these concepts were applied to foreign and second language learning in an SCMC environment.

Social interaction is a fundamental concept in the development of cognition proposed in Vygotsky’s theoretical framework. Vygotsky (1978) pointed out two levels, social level between people (interpsychological) and the individual level inside an individual (intrapsychological), to explain how a child’s cultural development functions. That is, a child interacts with other individuals who are with higher mental development in society and construct relationships with them to gain help with the development of his
or her own cognition and knowledge. The concept has been applied for language learning in traditional face-to-face classroom. With the emergence and development of SCMC, much SLA research on social interaction within the SLA context (Darhower, 2002). Darhower’s study on interactional features in SCMC chat room SLA context pointed out that learners transformed the chat room environment into a learner-centered discourse community through communicative behaviors (e.g., intersubjectivity, off-task discussion, greetings and leave-takings, and identity exploration and role play). That is, learners used the language they learned in the chat room to develop their sociolinguistic competence.

The concept of social interaction applied in SLA context provides learners to negotiate meaning among them. It was connected to the thinking of how SCMC relates to SLA theory by researchers. Some studies on input and output theory in SLA pointed out that negotiation of meaning could help learners to enhance comprehensive input and modified output (Gass, 1997; Long, 1996; Pellettieri, 2000; Sotillo, 2005). Negotiation of meaning within social interaction allows learners to “receive input and produce a type of output that is facilitative and perhaps even necessary for grammatical competence to develop in oral interaction” (Kawase, 2006, p. 6). Social interaction and negotiation of meaning tie with Vygotsky’s sociocultural theory that lead the sub-concepts of zone of proximal development and metaphor of scaffolding and collaboration.

The metaphor of scaffolding and collaboration evolved from Vygotsky’s zone proximal development (ZPD). According to Vygotsky (1978), learning happens within the area of ZPD. That is, the more knowledgeable students identify the ZPD of the less knowledgeable students engaging in a task, and scaffold the less knowledgeable students
until they are able to accomplish the task without assistance. The concept is often applied to interactions between teachers and students in the classroom and to second language learning within a sociocultural tradition. Aljaafreh and Landtolf (1994) summarized that scaffolding refers to “offer[ing] just enough assistance to encourage and guide the learner to participate in the activity and to assume increased responsibility for arriving at appropriate performance” (p. 469). They also concluded that “…learning is not something an individual does alone, but is a collaborative endeavor necessarily involving other individuals” (p. 480).

Warschauer (1997) reviewed computer-mediated collaborative language learning based on sociocultural perspectives and suggested that “a broad research agenda is required to gain a better understanding of the social, affective, and cognitive processes involved in computer-mediated collaborative learning” (p. 478). Collaboration is a sub-concept of ZPD which connects social constructivists’ assumption that “interaction in the collective is a necessary precondition for engaging in self-regulation” (Nyikos & Hashimoto, 1997, p. 507). Self-regulation means that when students engage in activity, they can negotiate meaning and convey correct concepts to other students and solve problems through the mediational tool of language (Lantolf, 2000). Vygotsky (1978) believed that individuals cannot learn alone without other people involved, and learning and mental development occur as a result of social interactions.

Collaboration is one of the strong predictors of the interaction between native-speaker (NS) and nonnative-speaker (NNS) participants in an SCMC environment (Okuyama, 2005). Students are encouraged to assist other peers when they participate in
a more collaborative task. Collaboration-task learning can promote negotiated interaction and help students to improve their output. Lee (2004) suggested that “online collaboration was beneficial to the NNS through linguistic scaffolding, as in the expert-novice relationship between the NNS students and the NS” (p. 93). LeMond (2004) applied activity theory to examine SCMC, team-based learning in the Spanish foreign language classroom. LeMond found that team chats can provide students with opportunities for social presence, identification of their problems, and collaboration with peers to solve their problems. The student-centered chats encourage students to play the role of teacher and, in turn, to construct knowledge collaboratively.

In conclusion, SCMC allows foreign and second language learners to scaffold their mental development through collaborating with other peers to not only learn language, but also to construct knowledge socially and culturally. That is, an SCMC context should be a platform which provides rich collaborative learning opportunities for students to engage in activities within their ZPD.

**Synchronous Computer-Mediated Communication and Language Learning**

The explosive use of the Internet in recent years has dramatically changed the ways in which people communicate and interact with other people in different areas of the world. For example, it has enabled geographically dispersed students to reach a native speaker of English for learning spoken English as a foreign or second language through a synchronous computer-mediated communication system (SCMC). Consequently, SCMC has been adopted as an alternative approach for FL and SLA within CALL.
involving text, sound, and video allows communicators to experience the context that is similar to face-to-face interactions in the real world.

Audio and videoconferencing has been adopted by school and business institutions for spoken language classes or training and has been reported to have positive effects on the learning environment and interactions in social and cultural dimensions (Wang & Sun, 2001). However, the videoconferencing technology has been costly and needs the support of high-speed Internet connectivity. Wang (2004) argued that the overall effectiveness of using video and audio functions for online, real-time, oral-based chatting is still in discussion. The delay of images due to a slow Internet connection affects the quality of the instruction and students’ motivation. As for chat programs, Skype, Yahoo Messenger and Windows Messenger can provide users with different degrees of audio and video quality. Skype provides a better quality of sound over high-speed Internet or wireless connections (Levy & Stockwell, 2006). Although these chat programs are free, they can only provide limited services for users (e.g. one-to-one video delivery and small number of chatters at the same time) and are not designed for educational purposes. Besides, they also require broadband connectivity to deliver audio and video; otherwise, the resolution of the image will be decreased and the sounds will be unclear with breaks or lags. Although the chat programs have some constraints, they can be effectively used for spoken language learning based on small group size interactions and appropriate teaching strategies. To effectively integrate videoconferencing and chat programs in language learning, pedagogically and technically, is highly complicated; however, a well-
prepared pedagogy and curriculum design can promote a better SCMC language learning environment (Hampel & Hauck, 2004).

**Significant Characteristics and Rationale of SCMC for Spoken English Training**

Many large scale or case studies of foreign and second language learning have revealed underlying SCMC’s characteristics: (1) It allows collaborative learning activities (Meskill & Mossop, 2003); (2) Participants are encouraged to be more active in communication (Bikowski & Kessler, 2002); (3) Participants can have control over their learning (Bikowski & Kessler, 2002); (4) It allows highly interactive, multi-way, and synchronous communication (Bikowski & Kessler, 2002); and (5) it facilitates the negotiation of meaning between learners and teachers (Blake, 2000; Smith, 2003).

Warschauer’s (1996) study researched the use of computer-assisted instruction to investigate students’ motivation for writing and communication in the language classroom. There were a total of 167 university students enrolled to take the writing and communication class through word processing, e-mail, the World Wide Web, and MOOs tools. Of all the tools, MOOs provided text-based virtual communities from the Internet for synchronous communication and role playing by students in different parts of the world. The synchronous communication system, MOOs, has characteristics to make students themselves feel a part of a community, to develop their thoughts and ideas, and to act as mediation for learning about different people and cultures. Consequently, learners desired to communicate with not only native speakers, but also non-native speakers in other parts of the world, as well as with their classmates and teachers. For writing, learners could use those instruments to learn better and more independently.
They became more creative and wrote better. Warschauer concluded that “[t]eachers can enhance student motivation by helping students gain knowledge and skill about using computers, giving them ample opportunity to use electronic communication, and carefully integrating computer activities into the regular structure and goals of the course” (p. 11).

Challenges of SCMC for Spoken English Instruction

Bromme, Hesse and Spada (2005) interpreted the term, barrier (based on their psychological research on problem solving and creativity), as “the gap between an initial and an end state. In other word, barriers are challenges which have to be overcome in order to attain a goal” (p. 1). It cannot be denied that SCMC is encountering or will face challenges in SLA. In general, technology is often the central issue for barriers of SCMC, but pedagogy should be an underlying issue as well (Lee et al., 2007). Several challenges exist in implementing SCMC for language learning in a collaborative context:

1. In synchronous forms of collaborative distance learning, high bandwidth and peer assistance could be a challenge. (Lee et al., 2007; Warschauer, 1997)
2. If there is a lack of systematic and adequate support, problem-solving and collaborative learning will not be successful (Warschauer, 1997, Yamada & Akahori, 2007).
3. Although it has great potential, interdisciplinary collaboration is a difficult task (Lewis & Sycara, 1993; Bromme, 2000).
4. The amount of information available on the Internet makes it hard to judge the quality of the information and to obtain relevant information (Lee et al., 2007).
In addition to these challenges, Lee et al. (2007) pointed out further challenges for pedagogy including: (1) it is hard to show someone how to do something without using body language or having face-to-face contact; (2) it would be easier to have the student in front of teachers in order to see students’ faces better. Also, it is difficult to solve technical problems face to face; (3) the initial connection to the student is important. Once a teacher has established who he or she is dealing with, the other instructions and communications should be easy; (4) teachers could not see learners’ facial expressions and body languages, and it is harder to critique and correct people when not face to face; and (5) instructors cannot tell if the student is really following along.

Consequently, there are two main issues from those challenges mentioned in Lee et al.’s work: pedagogy and technology. They imply the importance of pedagogy which focuses on instructional design. They argue that instructional design (ID) is a major issue for effectively integrating technology into online language learning. Since the computer has been a sophisticated technological tool widely used in the improvement of language teaching and learning, ID should also be valued and implemented to ensure the effectiveness of FL and SLA. It cannot be denied that some teachers still design and teach based on their experiences, and they are very successful. Some teachers who deliver their instruction based on FL and SLA theory without appropriate instructional design may consequently risk misinterpreting the instructions and, therefore, waste their time.

Implications for SCMC Curriculum Design and Teacher’s Competencies

SCMC is one of the most important developments in CALL because it is the only one real time online communicative system which allows direct person-to-person
communication (Warschauer, 2000). Therefore, the SCMC curriculum design should expand this strength to provide learners a more flexible and authentic learning environment. However, only a few studies have researched SCMC curriculum. Some implications for SCMC curriculum design can be found in CALL research. Additionally, with the rapid development of SCMC technologies, a teacher’s competencies to use the technologies and to apply instructional strategies to their instruction may be the crucial factors affecting the quality of instruction and learners’ learning in an SCMC environment.

**SCMC Curriculum Design**

Most CALL course designs are based on the involvement of technology and distance learning for specific purposes without an integrated framework. Winberg (2002) and Zhang (2002) simply added online components to their existing courses. Students were provided with CALL materials, but were learning in traditional face-to-face courses. Some designers were interested in taking particular technologies, such as CD ROM, WebCT, HTML, JavaScript, Hot Potatoes, and MALTED, into consideration when they designed their syllabus (Arneil & Holmes, 1999, 2003; Stramvi & Bouvet, 2003; Shawback & Terhune, 2002). However, from these studies, they implied that CALL design could be complicated to integrate with pedagogy, technology, and theory because of diverse learning purposes in different contexts using different tools.

Trinder’s (2003) Online English Mentor (OEM), based on large-scale multimedia courseware, integrates approach, content, and technology with course design. This courseware extends Hubbard’s (1987, 1988, 1992, 1996) methodological framework
relevant to design, development, and evaluation to operate at the approach, design, and procedural level. Trinder asserted that the approach to OEM is not a special method, but is derived from learning assumptions of second language acquisition theory and research. Tinder also uncovered crucial problems in multimedia design that take place in the process of learning. Hubbard suggested that by beginning from each of the three levels, designers are provided a thorough view from which to design a technology-based course.

In recent years, CALL curriculum designers could consider the appropriate theories and methodologies provided by previous studies on language skills and language areas in CALL (more details in Levy & Stockwell, 2006, p. 21). Those theories and methodologies employed by the researchers were not based on a general theory such as behaviorism, cognitivism, sociocultural, or constructivism. Rather, more multiple and rare theories used by CALL practitioners could also be considered an appropriate model or framework for curriculum design (more details in Levy & Stockwell, 2006, p. 124-125). In short, research specifically focusing on a holistic CALL and SCMC curriculum design are still lacking.

**Teachers’ Competencies**

A growing realization has been formed that traditional teaching techniques will not work in CALL, SCMC, or distance education. Simply delivering teaching materials or content to students and relying on technology to mediate communication and interaction between teacher and students is not an effective teaching method (Gunawardena 1992; Thach & Murphy, 1995; Wolcott, 1993; Yi & Majima, 1993). Unfortunately, there is little research on the competencies that teachers need to possess in order to use SCMC
effectively. However, some studies on teachers’ information technology skills and requirements for distance education can provide implications for those who use SCMC. A study focusing on the information technology (IT) competencies for English language teachers in Malaysia by Razak and Embi (2004) can be a valuable reference for online foreign language teaching. They developed an information competency framework for language educators based on document analysis, exploratory interviews, and literature reviews (more details on p. 11). This framework divides IT competencies into four categories: basic computer knowledge and operational skills, teaching and learning skills, planning and managing a computer-based environment, as well as assessment and evaluation. These four categories are diverse depending on the level of learners’ language competence. Their framework does take technological skills and pedagogical principles into consideration; however, the framework has not been evaluated through empirical studies.

Thach and Murphy’s (1995) study provides a broad view on competencies for distance education professionals. They identified ten competencies from previous articles which provide insight into the following three facets:

1. A survey of the studies that highlights the need for faculty and staff development in distance education;
2. A discussion of the importance of competency identification for training and development; and
3. An examination of the identified distance education competencies noted in the literature (p. 58).
They developed a distance learning goals and key competencies model (more details on p. 66), and output and competencies for distance learning roles framework table (more details on p. 67). The ten identified competencies are: interpersonal communication, planning skills, collaboration/teamwork skills, English proficiency, writing skills, organizational skills, feedback skills, knowledge of the distance education field, basic technology knowledge, and technology access knowledge. However, the study did not focus on specific competencies for varied kinds of distance education technologies and contexts; further research is still needed in these two domains. They suggested that the ten competencies will be useful as a research foundation for development training and certification programs for distance education professionals.

Schoenfeld-Tacher and Persichitte (2000) explored the discrepant competencies of faculty teaching in distance education programs. They reviewed current literature with respect to analyzing differential requirements for faculty in distance education teaching settings and examined the required skills for teaching with specific media. They suggested that faculty should have these skills and competencies:

1. Familiarity with basic research on the characteristics of DE (distance education) learners, their needs, and how their needs differ from those in F2F (face-to-face) settings;

2. Application of basic principles of instructional design (e.g., congruence of content, activities, media, assessment, and selection of appropriate media for the content);
3. Thorough knowledge of subject matter and common misconceptions;

4. Deep understanding of the necessity of learner-centered environments in online settings;

5. Ability to design constructivist learning environments;

6. Practical applications of adult learning theories, self-paced instruction, and computer-mediated communication;

7. Appropriate selection of online strategies and tools that promote reflection and deep processing of content (e.g., synchronous discussion, asynchronous discussion, alternative assessment);

8. Use of strategies that promote interaction among learners, instructor, and content;

9. Ability to foster a sense of community among learners;

10. Adaptability and flexibility with the capabilities and limitations of the delivery media;

11. Sufficient familiarity with the delivery medium to provide basic trouble shooting;

12. Ability to multi-task;

13. Time management (e.g., respond to students in a timely manner, undertake extensive advance preparation and planning);

14. Professional characteristics (e.g., motivation to teach, self-confident, articulate, good writer) (p. 12).

They concluded that the amount of teaching experience, knowledge of instructional design principles and understanding of distance education theories are crucial factors that should be investigated in future studies.
Spector and de la Teja’s study (2001) provided implications for online synchronous discussions (e.g., chat). They point out that “the moderator must (1) establish ground rules for discussion, (2) animate interactions with minimal instructor intervention, (3) sense how online text messages may appear to distant learners, and (4) be aware of cultural differences” (p. 3). However, those implications cannot cover the needs and skills for an online teacher. In summation, teachers’ competencies are crucial when technologies are integrated into language learning since their competencies can be critical factors affecting learning motivation, sustained effectiveness, and satisfaction. However, it is not necessary to say that teachers should learn and master all technological skills and knowledge in order to deliver their instruction online. At least, their competency should involve a related set of knowledge, skills and attitudes that enable them to create an effective learning environment.

Summary

Although the use of SCMC for spoken English teaching and learning is gaining more attention, the research related to technological limitations and pedagogical strategies is still relatively insufficient.

The literature review in this chapter described the communicative language teaching approach and Vygotsky’s sociocultural theory as a holistic framework adopted by previous research on asynchronous or synchronous text-based or audio-based oral competence learning. Within these theories, semiotic mediation, the negotiation of meaning, the zone of proximal development (ZPD), self-regulation, social interaction, and scaffolding and collaborative learning were underlying concepts which had been
adopted for the design of spoken English instruction in traditional classroom environments or asynchronous CMC contexts. However, the appropriateness and rationale of adopting these concepts to the SCMC context and curriculum design for spoken English programs were still in discussion.

Levy and Stockwell (2006) pointed out that CALL designers and language teachers are the main consumers when theory is taken into consideration:

The theory-practice nexus is more problematic when it comes to the application of theory or theories to language teaching or to design and CALL….For the designer or teacher, the problems associated with using theory for design and language teaching can lead to oversimplification or misunderstanding, or more weight being given to a theory than is warranted. (p. 140)

They called for multiple theoretical perspectives in CALL design decisions since design is a complicated process:

In language teaching, too, where language learning is becoming more broadly conceived—aiming now not only to assist learners in acquiring the forms of the language, but also helping them to develop learning strategies, learner autonomy, and intercultural competence—the need for an appreciation of a wider range of theoretical accounts is clear. (p. 140)

The research questions in this study involved both theoretical and practical aspects in the use of SCMC for spoken English teaching and learning. The experiences from both teachers and learners provided in-depth insights into these problems.
CHAPTER 3: METHODOLOGY

Introduction

The purpose of this study was to investigate the following specific research questions:

1. How do the instructors understand their experiences of delivering spoken English instruction in a real-time, online context and what meaning do they give their experiences? What are their experiences with the learning activities based on the provided curriculum? What are the strengths and weaknesses of the instruction from their point of view? What competencies or skills should a synchronous online spoken English instructor have?

2. How do the learners understand their experiences of taking the spoken English instruction in a real-time, online context and what meaning do they give their experiences? How do they learn? What are their perceptions of the instruction and curriculum? What are the strengths and weaknesses from their point of view?

Qualitative methodology was used to answer these questions. The instructors’ and learners’ experiences and perceptions of online spoken English teaching and learning were the focus of the study. According to Merriam (1998), the qualitative method assumes that “meaning is embedded in people’s experiences and that this meaning is mediated through the investigator’s own perceptions” (p. 6).
A Case Study

Based on the research questions, the study adopted a heuristic case study. A heuristic case study can illuminate “the reasons for a problem, the background of a situation, what happened, and why” (Merriam, 1998). A case study is an empirical inquiry that examines a current phenomenon within its real-life environment, and requires the researcher to establish the boundaries between the phenomenon and environment which may not be clear (Yin, 2003). For this study, through participants’ experiences, the researcher gained insights for spoken English teaching and learning in the SCMC environment. The researcher expected to locate the critical problems and provide solutions to these problems. Therefore, a case study could provide a holistic approach so the researcher gained in-depth understanding of SCMC in teaching and learning spoken English. Additionally, the case study method was selected because the contextual conditions were highly relevant to the phenomenon of study. That is, the use of an SCMC system for spoken English instruction was derived from the needs of foreign language learners. Moreover, the research employed a heuristic case study because sociocultural theory and communicative theory provided holistic frameworks offering insights into both the instructors’ and learners’ experiences and perceptions of the online training program.

The boundaries of this study were the use of an SCMC system for web-based teaching and learning of spoken English. The instructors were native English speakers in the United States, while the learners were native Chinese speakers in China. The curriculum was based on the sociocultural theory and the communicative language
teaching approach. Because a case study should be within a natural setting and include multiple methods (e.g., interview, observation, document analysis) and multiple sources of data (Punch, 1998), the researcher gathered data from interviews with instructors, interviews with learners, participant observations, and course evaluations.

The Online Synchronous Spoken English Instruction

In order to investigate the instructors’ and the learners’ experiences with the use of SCMC for spoken English teaching and learning, a real-time, web-based instructional program was developed by the researcher. This spoken English instructional program was designed on the basis of previous studies by Lee et al. (2007), which provided a model for the innovative use of an SCMC system for spoken English instructional program for foreign students.

The spoken English instructional program was seven weeks long during the spring of 2008. There were four classes taught by four instructors. One class had five learners; the other three classes had four learners. Each instructor taught a one-hour course three times a week. According to the model, the project involved four stages: preparation, testing, implementation, and evaluation stage.

Preparation Stage

This stage was designed to support both learners and instructors in preparation for training.

1. The researcher provided a curriculum (Appendix A) for instructors, including Theme/Unit (Introduction), Academic Content Standard and Technological Standard, Benchmark, Performance Indicators, Teacher Resources, Instruction
and Assessment, and Media. The researcher also provided lesson plans (Appendix B) for instructors, including teaching content, course teaching materials, technology, and learning activities and tasks. The instructors delivered instruction based on the curriculum and lesson plans and used a course management system, Moodle, to upload the curriculum, lesson plans, and teaching materials for learners to access.

2. The researcher developed an assessment of learners’ needs comprising background information, spoken language competencies, and experience with computer-assisted language learning. The researcher sent the needs assessment to learners to complete, so instructors could have a better understanding of the learners’ needs and prior knowledge.

3. The researcher developed a teaching and learning policy (Appendix C) containing important requirements regarding Internet etiquette, attendance policy, and copyright issues by which both instructors and learners must abide.

4. The researcher provided learners with both English and Chinese versions of the instructions regarding how to download and set up Skype, how to create an account and log in to the Moodle system, and how to take the placement test and complete the needs assessment.

**Testing Stage**

In this stage, the SCMC system (Skype and Adobe Connect) and the course management system (Moodle) on both the instructors’ and learners’ side were tested. The testing schedule was sent to all learners. Two graduate students in the instructional
technology program provided technical support for the project. They tested the wireless connection, needs assessment system, and placement system with instructors to ensure that they were workable, followed by a technical support staff with learners and a technology group with instructors and learners together. All learners and instructors participated in the testing before the training. A previous study confirmed that a broadband Internet connection and a computer with at least one gigabit of storage were needed to effectively support instruction and learning.

**Implementation Stage**

The implementation stage lasted seven weeks. Each instructor delivered one-hour, real-time, online lesson based on the provided curriculum and lesson plans, three times a week. Each instructor uploaded teaching materials to the CMS one week prior to each class, so learners had time to preview the contents. The technical support staff delivered a weekly newsletter (Appendix D) to learners, including suggestions for learners and instructors, training programs, announcements, latest activities, upcoming events, and technical support. Considering the time of instructional program was short, a formative assessment was replaced by the weekly newsletter for both learners to point out their learning problems and instructors to understand learners’ learning and help instructors understand the need of adjustment of teaching strategies to improve the instructional program. Besides, each instructor was required to attend a one-hour, weekly professional development meeting to strengthen each instructor’s teaching competencies.
Evaluation Stage

A summative assessment was conducted to note the progress of the learners. In addition, every learner was required to complete the course evaluation, and the results of both assessments provided instructors with suggestions to improve future related instructional programs.

Pilot Study

An exploratory study by the researcher (Lee et al., 2007) investigated the main factors affecting foreign students, learning spoken English in an SCMC environment. The study explored different SCMC systems to determine which system would be more appropriate for the implementation of a web-based spoken English instructional program. Through literature review, five crucial factors were found to be the main constructs for understanding instructors’ perceptions of the use of SCMC for spoken English training programs: effectiveness of instruction, satisfaction, technological savvy, motivation, and interactivity. These variables included 2-7 items which were adopted or revised from Noe and Schmitt’s (1986), Hicks and Klimoski’s (1987), Compeau and Higgins’s (1995), Bailey and Pearson’s (1983), and Doll and Torkazdeh’s (1988) scales in their research. Each item in the scale employed a 5-point Likert scale from strongly agree to strongly disagree. The Cronbach alpha value for reliability for the 34 items was 0.83, which is above the standard suggested for basic research in applied settings.

There were 16 participants who completed the survey. The result of the survey revealed that four variables associated with technological savvy, motivation, and interactivity were all significantly correlated with the satisfaction variable (Appendix E).
As for the effectiveness of instruction variable, it was not correlated with any other variables, but it may still be considered a major variable based on related literature. From the open-ended questions in the survey, most instructors reported that their pedagogy and instructional strategies were critical for them to make students’ learning successful. Besides, most instructors indicated that the weakest point of the web-based English oral training was the unstable Internet connection that produced sound breaks and image delayed. The problems mostly resulted from the learners’ side. The learners who were using a laptop and wireless connection usually encountered the problems. In addition, if learners operated multiple programs or tasks when taking the class, their computers would easily run out of the spaces and caused the lagged images and breaking sounds. According to the results, the researcher designed learning and teaching policy in which the requirements of equipment and the Internet connection are included to send to all participants for the present study to ensure the effectiveness and quality of the instruction and learning.

The exploratory study found that well-designed instruction and effective technology were the two major elements needed to support an authentic and interactive, web-based spoken English instructional program based on an SCMC system. A framework was developed to suggest that pedagogy and technology were the central elements for designing effective online spoken English training. The interrelation of these five variables may affect each other and also may support the pedagogy and technology to ensure effective instruction. Pedagogy can be effective and holistic due to the support from technology and the enhancement of motivation, technological savvy, effectiveness
of instruction, interactivity and satisfaction. In summary, the five constructs of the survey in the exploratory study were applied to design the course evaluation for this study. The open-ended questions in the survey and the interview questions for students were also adapted for the in-depth, semi-structured interview questions for the current study.

In addition to the exploratory study, Lee et al. (2007) conducted a field study using a business collaboration tool innovatively in an online spoken English instruction for foreign students. The main research question was what can be learned from both the instructors and learners who were teaching and learning spoken English online. The authors employed a qualitative research approach to have an in-depth understanding of instructors’ and learners’ experiences with the use of a business collaboration tool (Skype) for online spoken English teaching and learning. Data sources were participant observations of the implementation of activities and post-implementation interviews of both the instructors and learners.

Based on these interviews and observations, the authors provided a holistic model for the innovative use of collaborative tools in oral English training (Figure 1). They pointed out that pedagogy and technology were two major elements strengthened by technology support, a teaching management system, qualified instructors, and a well-designed curriculum. As a result, the authors revised the instructional program design and procedures to include four stages: preparation, testing, implementation, and evaluation. Each stage included some crucial tasks that needed to be implemented before moving forward to the next stage. The curriculum design was based on an instructional design strategy, which provided a systematic model including analysis, design, and evaluation
stages. They concluded that a holistic model for synchronous online teaching of spoken English should be systematic, effective, and well-planned. All in all, both the exploratory and the field study provided an important model to design the present study and online training program. The instrument scale, participation observation items, and semi-structured interview protocol were also adapted for data collection in the present study.

![Diagram](image-url)

**Figure 1.** A model for the innovative use of SCMC for spoken English training for foreign students
Research Participants

The research included two categories of participants, instructors who were native speakers of English in the United States and the learners who were full time employees in government enterprises and a private training institute in China, and an advanced technology private company in Taiwan. Since it was difficult to locate an instructor who had experience in teaching online spoken English and had a certificate or degree for teaching English as a foreign or second language, the researcher recruited four to five instructors who were native speakers of English and interested in teaching in the language online campus. Each instructor was paid hourly for each class. The instructors were graduate students and adjunct instructor from different majors at two large Midwestern universities. Each prospective instructor participated in pre-course professional development to enhance their instruction. The professional development included hands-on tutorials and specific discussions in the use of technologies and instructional strategies. They engaged in one-hour weekly meetings to prepare for their instruction based on the provided curriculum template and lesson plans.

All instructors used either their own computer or the Internet connections at home or on campus from which they could access high-speed, always-available, Ethernet jacks for accessing the campus network and the Internet. Alternatively, the instructors could log in to the free wireless connection on campus using a valid ID and password if they have a wireless-capable computer.

All learners voluntarily participated in the online spoken English instructional program. After the prospective learners completed the placement test, four to five
students were selected and assigned to each instructor for the instruction. These learners were expected to log on to each class and abided by the learning policy. Seven learners also took the post assessment to demonstrate their learning achievement and filled out the course evaluation to express their attitudes toward the instruction in the last class of the instructional program.

All learners used a high-speed Internet connection either at home or their workplace. One learner accessed the class through wireless in an Internet café shop several times. They contacted the technology support staff for technology support or obtained assistance from their peers after class.

Data Collection

This study used multiple sources and approaches to collect data, which included semi-structured in-depth interviews of instructors and learners, participant observations, summative assessments, and course evaluations. The researcher interviewed all instructors and at least two learners from each class to understand their experiences in using the SCMC system for online spoken English training. The interviews were recorded through the Audacity system which allowed audio recording. The interviews of instructors were transcribed by a native speaker of English hired by the researcher to ensure the correctness of participants’ descriptions. The researcher interviewed all learners in Chinese. The interviews of learners were transcribed and translated into English by a Chinese graduate student. Most importantly, all records were stored for this research only and were kept confidentially to protect participants’ privacy.
In addition to the interviews, one of the characteristics of qualitative research was that the researcher participated in the fieldwork to observe people’s behavior in their natural and authentic setting. The researcher logged in to each online class to observe participants, but learners did not know the proceedings of observations in each class session. The observations focused on how the instructors use the SCMC system, multimedia, and instructional technologies based on the sociocultural theory and the communicative language teaching approach. In addition, the researcher observed how the learners interacted and communicated with peers and instructors while they were engaging in tasks. In order to collect data from both the instructors and the learners, the researcher recorded each online class while simultaneously conducting his/her observations.

Course evaluations were distributed to all learners after the last class to obtain their perceptions of the instruction. The course evaluation, based on Lee et al. (2007) scale, had five constructs: learners’ motivation in the instruction, effectiveness of instruction, interactivity under the SCMC context designed by the instructor, learners’ technological savvy, and satisfaction with the instruction.

Finally, all learners were required to take both a placement test (Appendix F) and a summative assessment (Appendix G) which not only provided the learners with feedback about their progress, but also provided feedback to instructors so they could adjust their instruction in the future. The researcher and one of the instructors developed the summative assessment based on the TOEFL oral test format. The assessment included two tasks to express a viewpoint on a specific topic and four tasks to speak on the basis of
what was read and listened to. Both assessments took about twenty minutes to complete. The score scale was similar to the authentic oral test which is 0 to 5 points converted to a 0-30 scale.

**Semi-Structured In-Depth Interviews**

The purpose of the research interview was to obtain information from an individual that could not be directly observed by a researcher. Dexter (1970) regards an interview as a conversation with a specific purpose. In this study, an interview involved a dialogue between the researcher and a participant focusing on the research questions. Namely, the research questions related to participants’ perceptions, thoughts, and specific experiences. Patton (1990) pointed out that a researcher conducts an interview to acquire information contained in an individual’s mind:

> We interview people to find out from them those things we cannot directly observe. …The fact is that we cannot observe everything. We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those questions . . . . Qualitative interviewing begins with the assumption that the perspective of other is meaningful, knowable, and able to be made explicit. (p. 340-341)

Interviews can be categorized as highly structured (standardized), semi-structured, and unstructured (non-standardized) (Denscombe, 1998). A highly
structured interview is usually a verbal structure of the written survey requiring “carefully and fully wording each question before the interview” (Patton, 2002, p. 344). According to Wengraf (2001), in the semi-structured interview, all questions are more flexibly worded. The questions can motivate respondents to speak more and prompt the interviewer to initiate follow-up questions which are not predetermined nor predicted before the interview. This study adopted semi-structured in-depth interviews, which provided the researcher a more open-ended and less structured approach to elicit respondents’ perspectives of events in unique ways. It provided a more flexible approach to guide and motivate participants to explain their experiences using the SCMC system for spoken English teaching and learning. In addition to the open-ended questions, probes (questions or comments used to request more details) were used to follow up the interview questions. The researcher encouraged interviewees to respond to more in-depth questions that originated from the conversations during the interview. Therefore, more details and information were extracted from the respondents to help the researcher have a fuller understanding of events or phenomena. After analysis of the interviews, the researcher contacted those participants to make a follow up questions that arose later and to seek further understanding of the interviewees’ responses.

*Interview of Instructors*

The semi-structured, in-depth interview focused on instructors’ perceptions of online teaching, the attitudes toward the use of the SCMC system, the teaching strategies, curriculum and learning activities, and the role and skills of an instructor (Appendix H).
All the questions were open-ended questions, following up with probes that allowed participants to discuss issues that concern them. An interview protocol developed on the basis of previous related literature was used for the present study. Ng (2007) investigated the use of a synchronous e-learning system (Interwise) for online tutorials in an information technology course at Open University in Hong Kong. The author employed a qualitative case study and tutor and student interviews in order to collect data. The questions in the tutor interview were all open-ended questions focusing on the tutors’ experiences with how they use the Interwise system for teaching, the difference between face-to-face and online tutorial sessions, any problems they encountered, and the solutions they used to solve those problems (more details on p. 15).

In the Lee et al. (2007) study, the authors developed a survey to identify the instructors’ attitudes toward using the SCMC system for an online synchronous spoken English class. At the end of the questionnaire were three open-ended questions that can be used for the present study:

1. What three things did you like the best about your online spoken English training program experience?
2. What three things were the “worst” (were in most need of improvement) about your online spoken English training program experience?
3. Do you have other suggestions to improve the online spoken English teaching?

In order to identify how students interact with peers and the instructors, and how students learn based on the collaborative learning context in this study, the researcher reviewed a study by Du et al. (2008) on graduate students’ perceptions of the meaningful
nature of online discussions. In this study, the authors conducted a qualitative case study at a major public university in the southern United States. They investigated twenty graduate students’ perspectives on how the online collaborations contributed to the quality of online discussion through interviews and the instructor’s observation notes (more details on p. 25). Although the interview questions were for the twenty students to describe their experiences with the online collaborative learning, some of their questions could be revised to help understand instructors’ perspectives on the same issues:

1. Tell me about your online learning experience…how has it been, are you enjoying it?
2. Do you feel that you have been involved in online peer collaboration?
3. How do you contribute to the discussion? Do you think about your answers first or just join in and try to become involved in the discussion?

To sum up, the instructors’ interview questions were derived from three previous studies. The follow-up questions and probes were generated spontaneously during each interview. The instructors’ interviews were conducted through Skype after the training program and recorded by the researcher using the Audacity system or a digital recorder. A pilot interview was conducted before the formal interview to confirm that the wording of the questions was clear to the interviewees.

*Interview of Learners*

The following research questions relating to learners’ perspectives on the use of an SCMC system for online spoken English learning were used:

What are the experiences of learners who are taking the spoken English training
program in a real time online context? How do they learn? What are their perceptions of the instruction and curriculum? What are the strengths and weaknesses?

In order to respond to those questions, the researcher designed an interview of learners (Appendix I) to understand learners’ learning experiences. Seven learners who accomplished the learning were interviewed by the researcher within a week of the end of the instructional program. Since all learners were Chinese, the researcher interviewed them in Chinese Mandarin, and hired a Chinese graduate student to translate the interviews into English for data analysis. A pilot interview was conducted before the instruction to ensure that each question and was comprehensible to selected Chinese students at the Midwestern university.

Some related articles which provided interview questions and probes were reviewed, adopted, and revised for the study by the researcher. William’s (1999) qualitative research on the use of the chat room for adult learners’ distance learning program employed a semi-structured interview with open-ended questions to the interviewees. The questions in the interview highlighted learners’ comfort level with the chat room, whether or not it enhanced the learning environment and how well the chat room substituted for the typical traditional classroom environment (more details on p. 28-29). The following questions were adopted and revised:

1. How did you feel about using the chat room instead of the traditional classroom?
2. How was the chat room integrated into the overall course design? How did your class use the chat room?
3. What was the interaction/relationship between chat room participants?

4. How do you envision the chat room being used in future distance learning adult education environments?

Another study by Ross, Crane, and Roberston (1994) on the use of CMC conferencing for the distance learning employed a self-administered questionnaire. The questionnaire concluded with open-ended questions that focused on how students used the communication software for their learning, what problems they encountered, and how they gained support for those problems. The following questions were adopted and revised for the study:

1. Please describe any problems you have encountered in connecting to OISE. How were these problems resolved?

2. Please describe any problems you have encountered in using the conferencing software (e.g., PARTI, PINE) at OISE. How were these problems resolved?

3. Did you seek or receive help on technical issues from your course instructor, a training course, or other computer support staff? (p. 16)

Ng’s (2007) study, again, not only provided semi-structured interview questions for tutors, but also developed questions for students to describe their experiences with online tutorial sessions. In the interview, Ng asked:

1. Please describe the forms of your participation in online tutorials. For example, did you often ask the tutor questions and respond to his/her questions? Did you interact with other students when they raised problems and did you send them private notes?
2. What was your general impression of participating in online tutorial sessions? What was good about using the online tutorial system (Interwise)? What was not good about using it?

3. Have you encountered any problems (e.g., technical, social, cultural) when participating in online tutorials? If so, what were they, and how did you try to solve them?

4. How would you compare your learning experience in online and face-to-face tutorials? Do you think the participation in online tutorials has helped your study of the course?

5. Have you any suggestions for improving the organization of online tutorials in the future? (p. 14)

Some of these questions were similar to those in previous research. However, it helped the researcher highlight the crucial issues that should be focused on for the study.

Poon (2003) assumed that language learning means “an interactive process” (p. 1). Learners will obtain input from their teachers, other peers, and diverse materials. They will then respond to teachers’ and peers’ questions and will receive feedback from their teachers. This format of interaction helps students enhance and progress their language skills. Poon designed different types of activity to enhance the learners’ opportunities for practicing speaking and listening skills in an interactive approach. The activities included recording their own work on audio tapes to exchange them with their peers in order to obtain feedback from their peers and also from their tutors after they present their audio tapes. Paired work encouraged students to pair up with other peers for
their learning activities either over the phone or face-to-face. Students were encouraged to make a presentation to their family members and friends to obtain feedback from an audience. Interviews helped students interact with people on campus or communities to enhance their communicative competencies.

Some open-ended questions in the survey focusing on learners’ attitudes toward these activities were adopted and revised for the present study to determine learners’ sense of social presence:

1. What sort of activities do you like most or least in the course?
2. What sort of activities do you find most or least useful in the course? (p. 153)

Social presence was one of the concepts that was explored in this study. Gunawardena (1995) investigated social presence theory and the implications for analysis of interaction, communication, collaborative learning, and social context in CMC environments. Gunawardena assumed that social presence embedded in each medium could be varied, and the different quality of social presence would affect the way individuals interact. Furthermore, Gunawardena and Zittle (1997) demonstrated that social presence is a factor in the medium and the interlocutors, and their presence in a succession of interactions. Richardson and Swan (2003) also hypothesized that social presence may be a strong predictor of satisfaction within a CMC conference context. They developed a survey testing the students’ overall perspectives on the course and indicator statements relating to social presence for each type of course activity. The last part of this survey provided open-ended questions for students to express their actual
feelings about the course. Some questions were adopted and revised for the present research:

1. How satisfied were you with this course? For example, were your goals and/or expectations met? Please explain (e.g., were the course activities and assignments appropriate, was content well-organized, etc.).

2. What was your reason for taking the course in the online delivery format (e.g., like to interact with fellow students online, only offered online, etc.)?

3. Which aspect of this course was most beneficial to you and why (This can include different types of course activities, types of interactions, etc.)?

4. How much interaction have you had with your instructor (e.g., moderate, sufficient, lacking)? Please describe.

5. In relation to student-to-student interaction, would you say the type and amount of student participation was adequate for this course? Based on these observations, are there any recommendations you would make to the SUNY Learning Network?

The questions in the interviews or questionnaires above provided some key elements for developing a learner interview for this study. The interviews were recorded by the researcher, and a graduate student, a native speaker of English, was hired to transcribe all the interview data.

Observations

Observation is a part of living. Through observation people learn from interaction with the world. Kidder (1981b) argued that research observation is a tool used to “serve a formulated research purpose, be planned deliberately, be recorded systematically, and be
subjected to checks and controls on validity and reliability” (p. 264). The purpose of observation is to collect data which reflects an event, situation, or phenomenon in a natural setting. Through research observation, an investigator can observe the participants’ behaviors in a specific context. Observation can also be used for triangulating data from interviews, course evaluations, and summative assessments. In this study, participant observation was adopted.

**Participant Observations**

As Glesne (2006) described, conducting a participant observation, in a part of a social setting, “you learn firsthand how the actions of research participants correspond to their words; see patterns of behavior, experience the unexpected, as well as the expected, and develop a quality of trust, relationship, and obligation with others in the setting” (p. 49). The goal of participant observation is to understand the research setting, its participants, and their behaviors.

The researcher observed the instructors’ and the learners’ behaviors by logging in to each online spoken English class as a participant in the SCMC environment. The researcher attended each class as a participant observer in order to learn firsthand both instructors’ and learners’ behaviors in the use of the SCMC system for spoken English teaching and learning. However, the researcher did not notify the observations to all participants in order not to have impacts on the instruction and learning.

In order to systematically note what happens during the process of teaching and learning, the researcher noted what he saw and heard. The observation items were designed based on the focal points of the study (Appendix J): (1) instructors’ and
learners’ behaviors in the SCMC context; (2) interaction and communication between learners and instructors, and learners and learners; (3) technological problems and solutions to the problems; (4) operations of technology; (5) learners’ participation in learning activities; (6) collaboration and scaffolding; (7) social presence; (8) negotiation of meaning; and (9) zone of proximal development. Some of the items were derived and revised from related literature; some were developed by the researcher.

All classes were observed and recorded for triangulation of data with interviews and course evaluations, and for data analysis.

Course Evaluation

A course evaluation was conducted right after the last class of the training program for all learners. The benefits of a course evaluation were to provide opportunities for learners to express their viewpoints or opinions of the instruction. The course evaluation usually indicated the strong and weak points of the instruction and provided feedback for improvement of instruction in the future.

The course evaluation (Appendix K) for this study included five elements which were derived from the survey in the researcher and his co-authors’ exploratory study (Lee et al., 2007). The elements included learners’ motivation in the instruction, effectiveness of instruction, interactivity under the SCMC context designed by the instructor, learners’ technological savvy, and satisfaction with the instruction. Each element contained two to seven questions; all questions were revised to fit the purpose of the study. The questions in the course evaluation guided learners to reflect their real feelings about the instruction. The outcomes of the course evaluation were valuable for further analysis through
triangulation. A native Chinese graduate student reviewed the translation of the course evaluations in a Chinese version to ensure learners would be able to comprehend each question.

Data Analysis

Data analysis is a complicated process used to try and make sense of the data. It involves “consolidating, reducing, and interpreting what people have said and what the researcher has seen and read” (Merriam, 1998). Bogdan and Biklen (1982) defined data analysis:

Data analysis is the process of systematically searching and arranging the interview transcripts, field notes, and other materials that you accumulate to increase your own understanding of them and to enable you to present what you have discovered to others. Analysis involves working with data, organizing them, breaking them into meaningful units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others. (p. 145)

Glesne and Peshkin (1992) pointed out that “data analysis is the process of organizing and sorting data in light of increasingly sophisticated judgments and interpretations” (p. 130). The purpose of data analysis is to locate crucial meanings, patterns, and themes within what the researcher has heard and observed. There are two kinds of approaches used to analyze data: inductive and deductive approach.

In this study, the researcher adopted the inductive process for data analysis to have the key themes emerge through the use of detailed readings of raw data from the
instructors’ and the learners’ interviews and participant observation. The researcher immersed, summarized, and condensed the intensive and varied raw data, noted the primary themes and categories that emerged, and linked the research objectives and summary findings derived from the raw data to produce reliable and valid findings.

**Trustworthiness and Triangulation of the Data**

Triangulation in qualitative research is to combine multiple sources of data and multiple methods of data collection to ensure cross-data consistency to enhance the qualitative validity of the research. Patton (2002) suggested a type of triangulation which involves triangulating data sources. It refers to:

1. comparing observations with interviews;
2. comparing what people say in public with what they say in private;
3. checking for the consistency of what people say about the same thing over time;
4. comparing the perspectives of people from different points of view, for example, in an evaluation, triangulating staff views, client views, funder views, and views expressed by people outside the program; and
5. checking interviews against program documents and other written evidence that can corroborate what interview respondents report. (p. 599)

Denzin (1989c) described triangulation as “[b]y combining multiple observers, theories, methods, and data sources, [investigators] can hope to overcome the intrinsic bias that comes from single-methods, single-observer, and single-theory studies” (p. 307). The researcher interviewed both the instructors and the learners who were using the SCMC system for spoken English training. Additionally, the researcher attended each
as a participant not only to participate with learning activities, but to conduct
participant observations.

The trustworthiness of a qualitative case study deals with validity and credibility. Within Merriam’s (1998) strategies to enhance internal validity, triangulation is one of the strategies used to strengthen trustworthiness. The credibility of qualitative research depends on rigorous methods (observing and interviewing) for doing fieldwork which can yield high-quality data, avoiding the researchers’ dispositions and biases, and involving triangulation of multiple methods and multiple sources of data. Additionally, expert audience review is used as credibility triangulation. Experts can evaluate the analysis of the research with their professionals on the basis of criteria (e.g., social science standards). In the present study, the researcher had the research reviewed by the committee members at Ohio University to ensure the quality of research methodology, design, questions, data collection and analysis.
CHAPTER 4: FINDINGS

Introduction

A qualitative case study was conducted to investigate how the instructors and learners understand their experience of teaching and learning spoken English using a synchronous computer-mediated communication system. The research specifically addressed the following questions:

1. How do the instructors understand their experiences of delivering spoken English instruction in a real-time, online context, and what meaning do they give their experiences? What are their experiences with the learning activities based on the provided curriculum? What are the strengths and weaknesses of the instruction from their point of view? What competencies or skills should a synchronous online spoken English instructor have?

2. How do the learners understand their experiences of taking the spoken English instruction in a real-time, online context, and what meaning do they give their experiences? How do they learn? What are their perceptions of the instruction and curriculum? What are the strengths and weaknesses from their point of view?

The findings are organized and presented in the following order based on the specific questions: the instructors’ experiences of the instruction in an SCMC and SLA/FL context; instructors’ experiences of teaching based on the curriculum and the learning activities; learners’ experiences of taking a real-time, online spoken English instructional program; and learners’ perceptions of the instruction based on the curriculum and learning activities.
The Instructors’ Experiences of the Instruction in an SCMC Context

There were four instructors involved in this research who were all native speakers of English and taught spoken English in a real-time, online context. One of the instructors had been teaching English writing classes in a face-to-face context for six years at a university, but had never taught online (Instructor A); one instructor was a doctoral student majoring in Instructional Technology and had been a teaching assistant who taught fundamental English in both online and face-to-face classes for more than a year (Instructor B). Another instructor was studying in the Instructional Technology doctoral program and had not had any prior experience teaching an online spoken English class (Instructor C). The fourth instructor was a graduate student studying Political Science for a master’s degree. He had taught elementary students English literacy many years ago, but he had never taught any online classes before (Instructor D).

Instructors’ Perceptions of Web-Based and Face-to-Face Language Teaching Environments

Based on the triangulation of instructors’ interviews and participant observations, all instructors recognized that they were satisfied with the online teaching in general. No matter what background and experience in online spoken English teaching the instructors had, they understood that they tended to create an environment similar to a face-to-face context. Three of four instructors felt that if they had an option between web-based and traditional face-to-face classroom environment, they would rather choose the latter one (as evidenced in their comments below) since more interpersonal interaction was possible in a face-to-face environment:
Instructor A: I do prefer face-to-face just because I have a big personality and frequently use large, quick gestures and move around the classroom. I am sarcastic as well, and so I’m able to insert little comments in a traditional classroom that because of the time delay and the confines of online instruction, I would not be able to. So I prefer face-to-face communication, but again I’m a convert to online course instruction. I think that the SCMC system was far better than I ever imagined it could be. The other factor in my preference is my comfort level. I’ve been teaching for six years in the traditional classroom. I have only taught an online course for seven weeks. So think that it could be possible that it would/could be different in the future. But at this point with the amount of experience, I favor the traditional class.

Prior to this research, Instructor A had never had any experience teaching language online, but did have experience in the traditional classroom environment. She favors teaching in a face-to-face context; however, she definitely thinks that SCMC could be a possible appropriate option for her teaching in the future.

Instructor B, who has taught both online and face-to-face language classes before also indicated that he favors teaching in a face-to-face classroom:

Instructor B: For the most part I prefer face-to-face still, just because again we have those cues that we can pick up on, and it makes it easier. But as far as general convenience and using things, you know, I think this [online teaching] is definitely the future way to go because it is so convenient. It cuts down on expenses and everything. So right now, I still prefer face-to-face, I guess, because you can pick
up on those visual cues more easily, but I think that will get better as time goes on.

Considering the interactive, nonverbal cues among all participants in class, Instructor B favors the face-to-face class. He does consider online teaching as an alternative in the future because of its convenience and low cost.

An instructor who never taught English as a foreign language in either the online or the traditional classroom environment indicated the reason he prefers the face-to-face classroom:

Instructor D: I mean I still prefer the face-to-face, I guess, teaching method because with a language course like the one that we’re teaching, it’s something that you use personally, you know, and you speak to another individual. It’s a personal interaction. So, for them to get the most out of the teaching program, I think a face-to-face class would actually be better for them because they get a face-to-face individual interaction which helps them a lot more than maybe a web.

From these instructors’ views, personal interaction (constituting body language and visual cues) accounts for the general preference of spoken English teaching in a face-to-face environment. However, Instructor C had another viewpoint. Instructor C stated that the selection of a real-time online class or a face-to-face class highly depends on the subject:

Instructor C: You know what, I guess it depends. I’m going to say it depends. It depends a lot on the subject for one. I guess a good example, computer training I would want to do face-to-face. I think it’s a lot more effective to do things like computer training, software training right there, hands-on, face-to-face. A class
like this [learners and instructors were teaching and learning in different places and in different time zones], Spoken English, you could definitely do online. I don’t know if it could’ve been better face-to-face. It may have. It may not. But I would, if I had to pick one, I would say I prefer online. I do prefer online teaching, but a lot of it has to do with the subject.

Instructor C recognized that many variables need to be considered when determining which setting is more appropriate. According to Instructor C’s example in the interview, he stated that if a course (e.g., computer training) focused on hands-on activities, it would be better to conduct the course face-to-face since the instructor would be able to guide learners step-by-step using the additional aid of a handout in order to complete the training. In contrast, for a spoken English class with instructors and learners separated geographically, Instructor C preferred a web-based environment. Instructor C actually took the geographical factor into consideration. Instructor C further explained his viewpoint:

Instructor C: Well, besides the subject, I would want to take into consideration the activities that we need to do. You know, some learning involves hands-on activities. It’s hard to see hands-on activities online. You know, I would want to see the curriculum, the activities that need done, the learning, you know the objectives, you know what kind of learning needs to take place. Some might just be intellectually-based; others might be action, hands-on where you do things. So I’d want to see that, too. But yeah, I would want to take all those into consideration before I pick which one to go with.
According to Instructor C’s experiences, he would select online teaching format depending on both subjects and learning activity. However, some instructors might have different views from Instructor C. As instructor A who had been teaching English writing class for more than 6 years said, she preferred to teach a language course in a traditional face-to-face environment. Instructor C’s opinion might be argued and criticized, but what he really tended to emphasize was that no absolutely correct answer to what kind of setting is the best one. Many reasons (e.g., time, geography, subject, and learning activity) should be considered for an educator or a designer.

From the instructors’ views above, no matter whether they had experience with teaching spoken English online or in a face-to-face environment before, after their instruction this time, three of four preferred face-to-face instruction. However, all of them agreed that they would like to have opportunities for applying web-based methods in their instruction in the future.

Use of SCMC Technology for Instruction

In the study, the SCMC system adapted for instruction included Skype and Adobe Connect which provided both audio and video functions for interlocutors in an online, real-time interactive and communicative environment. There was only Instructor B who had used both systems for teaching English language before. The rest of the three instructors had never used the systems for language teaching before. (However, they had all used Skype for business and/or personal online chatting.) To enhance their skills in the use of both systems before the instruction, the researcher designed and scheduled a professional development (PD) for them. In the PD, they were required to understand
how to integrate each function of the system with the curriculum and learning activities. They tested the systems with the technological support group and learners prior to their formal instruction. Below is one instructor’s description of her use of these systems during the online class sessions:

Instructor A: I first used Skype at the beginning of every session to make contact with the students, and from there, I would ask them to log on to Adobe Connect. And in every class, we would continue to use Skype because the sound quality was better. We were never able to use Adobe Connect alone (without Skype) because of sound issues. The students would log into the classroom on Adobe Connect, and we would employ the camera, the web-cam. And, again, we continued to use Skype for audio. And then throughout the session, any time they would have difficulty with some of the terms or just any sort of class discussion, we would use the Whiteboard function. And then oftentimes, we would use the chat function as well . . . . We would use the web link function when I would want to show a portion of the video segments assigned for class. We tried that function a few times but had problems because of connection speed or internet connection . . . . So, those were the primary functions.

Instructor A used Skype for audio and Adobe Connect for video in class sessions since Skype could provide a better sound quality while Adobe Connect could satisfy the users with video, Whiteboard, and Web link functions. She described her impressions—both good and bad—of using an SCMC system for instruction:
Instructor A: Well, it’s important to say that I was not an advocate for online instruction. And I had some misconceptions as to what online instruction was. And so I am now converted and see the benefits of using SCMC for teaching. What was good about it…the webcam function was wonderful. Just because of my personality, I love human interaction, face-to-face interaction. And so it’s very helpful for me to not just know a learner by a name but to have a face to go with the name.

She continued describing the benefits of the webcam function in further detail:

Instructor A: The webcam function also allowed for non-verbal feedback. You know, if I said something, I could see the student’s face to see if she understood what I was saying. I could also see the student’s face to see if he was involved in the discussion and or was thinking about what was being said or whether he was tuned out just like I can in the traditional classroom. As far as other benefits, just all of the functions that Adobe Connect offers, they provide the same tools that are available in the traditional classrooms. It really is an easy transition into an online class with all of the different functions that are at my fingertips.

In brief, Instructor A, who had not taught online before, had a different view on the use of an SCMC system after she completed the seven-week instructional program.

Besides the benefits, she found some weaknesses in the process of her instruction:

Instructor A: As far as maybe what was not so good about it, sometimes, depending on the connection, there could be a delay. My personality . . . speak fast. And I need to slow down. And so my personality is smaller using online communication than if I was in a traditional classroom because I use big gestures, and I move around a
And so it was somewhat restrictive there. Some days the sound was good. Some days the sound quality would not be so good. And I need to be able to be comfortable enough with the system in order to not be distracted. If I was teaching and a student lost connection, that student would contact me via chat or, you know, some other method. Sometimes that distracted my train of thought, whereas that would not happen in a traditional classroom.

Instructor B stated that he also used both Skype (audio) and Adobe Connect (video and Whiteboard) for instruction. In his experience, the audio worked pretty well, but the video sometimes cut off. He, too, used the Whiteboard function within Adobe Connect. He pointed out that the Whiteboard function allows “multiple people to put in things at the same time, so they don’t have to wait so long for their turn and then while you’re speaking, they can also be typing things and entering things there.” Consequently, he felt that Skype and Adobe Connect provided a fair level of interactivity for instruction. His impression of the use of an SCMC system was pretty positive, and he agreed that it is a good system to use:

_Instructor B: Um, again it was nice for the interactivity and, of course, with having distances and such. It’s very nice to have it. Again, I can be here in the United States and people can be, you know, across the world working on this. So that’s very nice. And, also, as far as time goes, if the student wants to do something, upload it and put it there, I can always view it later. So you don’t have to be in the classroom at the same time, which is nice._

Instructor B pointed out the weak points.
Instructor B: The only part that sometimes is difficult, and this may be improved as we get better bandwidth again, but with the video, if you don’t have the video, it’s very hard to do turn taking, okay, cause you can’t see who wants to speak or who doesn’t want to speak or who is, you know. Usually if you have a live classroom, you have, you know, you have visual cues that you can come up to. Again, since you don’t always have those visual cues and sometimes it’s even more difficult with non-native speakers, cause sometimes with those visual cues, you can catch what their meaning or intent is. And even with, even if you do have a camera on, it’s usually just focused on the face and some people use more than just the face to give you those cues. So you almost need their whole body or their environment that they’re in to see what’s going on . . . Also, again as far as the connection, sometimes the connection wasn’t always so great. So it’s important to have a good connection.

Like Instructor C realized that both the audio and video functions offered by the SCMC system enabled him to interact with other people in real time even though they were separated geographically. Consequently, Instructor C said that he combined both functions to replicate a classroom constituting engagement, social presence (e.g., eye contact and non-verbal gestures), and interactivity.

Instructor C: I used them all I guess to replicate again, replicate the classroom, to build social presence, to, you know, combine audio with video, you know, combine those together, you know, just to make things more engaging, make it more interesting for the students . . . I guess just to make it seem like I was more of a
real person, a real person that was there. I guess I didn’t want to seem distant. I wanted to, you know, like I said, be perceived as a real person, not just a person they could hear, but someone they could see, someone they could interact with in real time. You know, just as I think the video part of that, too, is a big part of that. It gives people the sight and, you know, the non-verbal, you know, to kind of see what’s going on, and, you know, they can see your reaction to their questions and this and that... you know, make it seem as realistic as we could. Or make it, bring us as close together as we could cause, you know, we’re spread out.

Instructor C had the same impressions of the benefits of using the SCMC system for his instruction. He thought that the system was very good to use because “it makes ‘it’ [instruction] easy to do. It allows people to connect with other people who are on the other side of the planet. I thought it was great. It shows the advancement in technology.” Instructor D agreed that Skype offered better sound quality. He also appreciated the video function of Adobe Connect though it sometimes affected teaching and learning because it was delayed. He stated that

[the video program on it was, you could say, like a little, um, delayed, so if I had like moved my hand, it wouldn’t appear for a couple seconds. You know it wasn’t in real time. So that kind of affected the way students understood something.

In conclusion, all instructors recognize that the use of an SCMC system for teaching online spoken English is positive overall. According to the instructors’ experiences, the strengths of the use of SCMC system for instruction include: (1) it not only provided audio and video functions for promotion of interaction and communication,
but also other functions (e.g., Whiteboard, Weblink, to enhance comprehension of conversations and resources searching; (2) the webcam allowed for non-verbal interaction; (3) it provided a fair level of interactivity for instruction; it allowed users to communicate with others without the constraints of geography and time; and (4) it allowed instructors to replicate a learning context which was similar to traditional classroom environment that engagement, social presence, and interactivity occurred often. The instructors also recognized the following limitations of the system which could be in summation of connectivity and equipment issues: (1) the images were delayed due to the bandwidth or unstable connection; (2) the video function only allowed limited image size that did not allow the view of the whole body of each participant; (3) the unstable connection somewhat affected interaction and communication; and (4) the unstable connection affected both the instruction and learners’ understanding of the instruction.

Facilitating Learning in SCMC and SLA/FL Context

Pedagogy in a synchronous computer-mediated communication and second language acquisition or foreign language context differs from that in a face-to-face classroom in terms of curriculum design, learning activities, and pedagogical strategy. An effective instruction with appropriate curriculum should meet the learners’ needs and learning goals rather than only guide learners to use technologies or absorb knowledge from the instructor. According to Salmon (2000b), the goals of effective design of a web-based learning environment should facilitate learning and meaning formulation. Besides, effective online facilitation can optimize a collaborative learning community instead of providing only self-paced or self-autonomous instruction. Collison et al. (2000) indicated
that the following characteristics exist for an online learning community:

1. Participants post messages and participate in discussion forums regularly, “regularly” being defined as appropriate to the context.

2. The online community meets its members’ needs, and participants express honest opinions.

3. Participant-to-participant collaboration and teaching are evident, and spontaneous moderating occurs among the participants.

4. Reasonable venting about technology, content, and even the facilitator is acceptable and evident.

5. Participants show concern and support for the community. (p. 77)

Consequently, effective online facilitation should engage, motivate, and mentor learners to foster a communicative, interactive, collaborative, social, and cultural learning environment.

In this study, to ensure effective pedagogy in an online learning environment, all instructors adapted the curriculum and proceeded with learning activities designed and provided by the researcher. Vygotsky’s sociocultural theory and communicative language teaching approach served as two primary frameworks to support the development of the curriculum for the instructional program. In addition, the researcher designed the instructional program based on a framework in the previously related study which indicated pedagogy and technology are two major elements and interactivity, effectiveness, motivation, technology savvy, and satisfaction are five crucial factors to design a web-based spoken English instructional program (Lee et al., 2007).
From information gathered from the observation data, instructors sent a needs assessment through email to each learner to acknowledge the learners’ background and specific needs for learning. The instructors set up a schedule to implement technology testing with each learner to help the learner be ready for the first class. Then weekly, the instructors previewed the curriculum and weekly teaching template and uploaded the teaching materials to the teaching management system so learners could preview the materials prior to the class.

In the interview, Instructor A stated how she prepared for instruction and facilitate learning based on the curriculum template.

_Instructor A:_ Certainly I read the material, ah reviewed the videos and articles that were part of the curriculum. And then I would take notes on the videos, and from some of the articles, I would extract information that I would want the learners to discuss or points that I would want them to discuss. I would post all of the information on Moodle. The curriculum was very well laid out. It was very specific for the instructors how to conduct each class session. I would just use that same tactic as the curriculum example given for the instructors, and I would fill in with additional questions and plan my own outline for the day. In fact, if it would be helpful, I could send you a copy of the outline/schedule that I created for each class session. I could send one of those to you for you to see how I would lay it out.

Like Instructor A, Instructor C previewed the contents of the curriculum template, lesson plans, and teaching materials. He prepared for and thought over what and how he was going to deliver instruction.
Instructor C: I would usually read over the material, the course. I wanted to read over the material that everybody else was reading. And I tried to prepare just as they would. Maybe write questions. Write down vocabulary words, important terms, things like that. And then, you know, just look over the lesson plan to see what activities we might have planned and, you know, maybe adapt some of those activities for my class or keep them the same. So I just kind of, I prepared just as a student would. Well, I want to be, of course I want to be knowledgeable in the subject, too, and especially if somebody had a question over something they read, you know, on page 25. I kind of wanted an idea of, you know, what was talked about. I didn’t want to say, oh, I didn’t want to seem like I didn’t know what was going on.

Instructor D described how he prepared for his teaching based on the curriculum template and lesson plans. He took strategies to extend learning activities and guided learners to accomplish learning.

Instructor D: Um, preparing for my teaching, I would go in after I posted the requirements for the class or the specifications or whatever, and after I would read the lesson plan that you gave us, I would think of different ideas to present to them that are probably outside the norm of an academic course. So I tried to bring up very common situations especially in our, what do you call it, in the scenarios that we would do. We would create sort of situations where they would have to communicate with someone and create an environment behind them. Like say that you are in a supermarket or you’re at an outdoor market and you want to haggle;
you want to get the prices down, so I would use those types of scenarios to illustrate that sort of feeling factor. So I would sit there and try and just think of very common situations, I guess.

The instructors participated in weekly professional development to enhance their skills and pedagogical strategies. Most of the time, the weekly professional development was held online through the SCMC system as well, but the researcher would sometimes approach one of the instructors to implement it face-to-face. For example, the researcher conducted the first professional development face-to-face before the initiation of the instructional program. This professional development was a hands-on workshop which introduced the SCMC system (e.g., Skype, Adobe Connect), course management system (e.g., Moodle), and other technologies for self-learning (e.g., Audacity). The instructors were required to be familiar with the basic functions within those systems, so they could mentor learners as they practiced those systems in the first class.

After each weekly professional development meeting, all instructors and the researcher discussed the important issues regarding improvement of teaching and learning to be released to learners via a weekly newsletter distributed through email. The weekly newsletter served as a substitute for formative assessment during the instructional program because of the time limitation of the instruction. Announcements regarding the pedagogy; and learning updates from the management group and technological support group; suggestions from instructors and learners; and weekly learning activities were delivered to each learner by the weekend after the instructors’
weekly professional development meeting. Below are some announcements and suggestions from one of the newsletters.

*Message from the Instructors: We will send the topics of each class and teaching materials through email or post on the Moodle. Please frequently log on to Moodle to check announcements or messages there. Since we just started the instruction, we need more time to get everything on track. We will upload teaching materials one week before the class.*

*Message from the Learners: In regards to one learner’s suggestion about using the web-camera, in the following weeks, instructors would like to incorporate the use of the web-camera pending the needs of the class. Instructors will ensure the quality of the connection before using the webcam for teaching.*

*Message from the Course Management Group: Most problems occurring in the first week class were technical problems which, unfortunately, sometimes delayed the class. Therefore, we have decided to enhance our services to help all learners be ready for each class and to assist with any technological difficulties such as disconnection during class.*

Prior to the end of each class, each instructor distributed assignments for learners to complete. Those after-class activities were posted by the instructor on the Course Management System, Moodle. Each instructor repeatedly followed the systematic procedure to deliver the real-time, web-based spoken English instructional program with
the support of a management group and a technology support group. From the observations, it was noted that the members of the technology support group addressed the technical problems during class as they occurred. They usually guided the learners through the necessary steps to solve the problems with logging on and connecting to the class. In doing so, the instructor could continue the class, and the other learners would not be interrupted or hindered by the problems. As for the pedagogical strategies throughout the instructional program, each instructor was given the flexibility to adapt the lesson depending on the varied needs of the learning activities.

Instructor A: I focus on being mindful of the three primary learning styles [behaviorism, cognitivism, constructivism]. And so to accommodate the visual learners, we used the Whiteboard during our discussion time. It also helped to
show evidence that I understood what the learners were saying. You know, when learner would express his opinion or define a key term, I would reiterate his idea in word or few words and put it on the Whiteboard to show that oh, okay, yeah, that is exactly what I was saying, or no, that’s not it at all. So, there were many benefits of using the Whiteboard. Writing notes on the board helps native English speakers in the traditional classroom setting, so I would assume that it would be extremely helpful for non-native English speakers: to hear the spoken word and also see the spoken word. So I mostly relied on Whiteboard. And then like I said, the class focused most on discussion and role play and that was very easy because the two learners that I had were wonderful. Also the curriculum was set up to lend itself so well to just asking questions. So those are the primary strategies that I used.

In an interview with Instructor A, she emphasized the importance of three substantial theories or frameworks under which learning theories fall: behaviorism, cognitivism, and constructivism. She considered and adapted an appropriate one on the basis of different learning activities and objectives. She also considered the differences between native and non-native English speakers in terms of learning strategy and figured out the solutions to help learners’ learning. For, example, she usually relied on the Whiteboard to reinforce the learner’s concept of spoken words. Another instructor focused on the increase and reinforcement of interaction between learners and learners, and learners and instructor.

Yet Instructor B perceived the diversity of Asian learners’ characteristics of learning; he encouraged the learners to communicate and interact more with another one,
which fostered a positive and learner-centered learning environment. According to Berns’ summary of characteristics of the communication language teaching (CLT) approach (1990), “[d]iversity is recognized and accepted as part of language learners and users as it is with first language users” (p. 104).

Instructor C: I think we try to do it [encourage learners to interact with one another] sort of as a, a guide and try to get the students to interact with each other more, and sometimes that can be difficult. Well, because they can maybe be quiet or they don’t want to seem like they’re talking all the time and not giving other students a chance to talk . . . . I think they could get used to [the way of encouragement] this and benefit from this. I know it’s a little different from practices in the Mainland [China] at least with, you know, how the teaching is done. I think it’s done very passively, you know the instructor sits up there and lectures for 45 minutes and the students just receive the information. But I think this type where you’re again, you’re not so much an authority figure, you’re somebody who is trying to have a conversation with somebody.

In the CALL environment, a variety of pedagogical paradigms have been introduced to optimize effective instruction (Kramsch, 2000). Chapelle (1997) suggested instructional SLA and specific theory are needed to improve the design and pedagogy. Egbert (2005) stated that multiple theoretical principles should be taken into consideration because of the rapid development of the use of technology in distinct cultural and social contexts. Kern agreed that a “one size fits all approach will not work” (p. 187-188) because of the difference of goals, contexts, and problems in the CALL
environment. In this study, Instructor C directly pointed out his understanding of the need for multiple paradigms for the instructional program.

Instructor C: [O]n instructional strategies or using different types of theories, I mean, you have to be well-rounded. You have to use every different kind, and you can’t be set in stone in one way. I think you have to be diverse. The strategies I used with this class probably won’t be the same as my next class or any other class after that. So, you have to be ever changing, too. I know my strategies from the beginning definitely changed from the end of the course. So, you know, here are a lot of different ways.

Although all instructors used the same curriculum template, lesson plans, and learning activities for instruction in the present study, in their interviews they described that they adopted some strategies and approaches to facilitate learning. They did not fix one strategy or one theory to all classes because of different learning activities and learners’ background (non-native speaker of English). Another finding was that they all like to take different strategy or theory to encourage learners to be more interactive and involved. Consequently, learners could have more outputs and learn from other peers through interactions among them.

Instructor’s Role in an SCMC and Spoken English Instructional Program

Instructors in a traditional teacher-centered classroom control the environment because of their monopoly on information and knowledge. Littlewood (1981) suggested instructors should no longer dominate the class but monitor learners’ learning instead in communicative activities. Hu (2002) pointed out that instead of transmitting authoritative
knowledge, the role of teacher in a communicative language teaching (CLT) class is that of a co-communicator, a needs analyst, an organizer of resources, a facilitator of procedures and activities, a negotiator, and/or a learner. The teacher constructs a collaborative learning environment to proceed with group work which provides opportunities to share knowledge and assist each other. However, in a web-based learning environment, with instant and convenient access to rich resources of information and knowledge, learners do not entirely depend on instructors for information and knowledge. Knowlton (2000) argued that the instructor in a web-based class should play the role of facilitator or coach instead of the sole “giver of knowledge” (p. 7). Goodyear, Salmon, Spector, Steeples, and Tickner (2001) outlined the major roles of a competent online instructor as a content facilitator, process facilitator, technologist, task designer, advisor/counselor, assessor, and researcher. Gatbonton and Segalowitz (2005) argued that the role of an instructor in a CLT environment is a facilitator, monitor, and knowledge provider.

According to Instructor A’s descriptions below, she recognized that she was a facilitator who would not just deliver knowledge to learners, but guided learners to contribute themselves more in learning activities.

_Instructor A: Sure. I viewed it—and I think it was also made very clear—that as an instructor, you need to be a facilitator. So there were times when I would not lecture at all. You know, we had key terms each session, and I would not start off defining those key terms. I would start off by having each learner give his idea of what this key term is or give an example of the key term. And it was almost after his was_
done that I would give my own interpretation of that term for clarity. And I didn’t
do that all the time. Oftentimes the learners were right on the mark with exactly
what the term meant, and so there was no need for me to contribute at all. And I
think most of it, probably 95% of the time in the class was discussion-oriented, or
we would role play scenarios and so forth. And so I would ask the learners
questions. I would put the question out and then the learners would just take it from
there.

Kemshal-Bell (2001) pointed out that the role of an online instructor should be a
facilitator who can have facilitation skills to engage the learner in the learning process,
give feedback to the learner, propose good questions, listen to the learner, provide
direction and support to the learner, manage online discussion, build online teams, build
relationships in the online community, and motivate learning. Collison et al. (2000) use
the categories of “guide on the side,” “instructor or project leader,” and “group process
facilitator” (p. 43).

Instructor B thought learners in this type of learning environment should be
responsible for their learning. He considered how to mentor learners and support their
learning.

Instructor B: My role as instructor is trying to get the students to sort of take
responsibility for their own learning and allowing them to, you know, sort of
giving them the tools that will help them learn. I think they could get used to this
and benefit from this. I know it’s a little different from practices in the Mainland
[China] at least with, you know, how the teaching is done.
Instructor C understood that his role in this instructional program was a facilitator as well as a coach. He concerned about learners’ needs and wanted to be a coach to advise and guide learners to locate useful resources in the process of learning.

_Instructor C:_ I mean a lot like the face-to-face, you know, I’m a facilitator; I’m a coach. You know, it’s not really a teacher-centered classroom. I don’t see it as that. Instruction, I think it needs to be more individualized, and you can do that in an online, in the online world. You can kind of individualize what you need to do for each student and kind of get a grasp on what they need. But, yeah, I mean, I wasn’t really the sole source for information. I didn’t want to be that. I wanted to be, you know, I’m the learning facilitator. I’m the coach. I’m kind of the equal. I wanted to see it as equal with everything.

Like, Instructor A, B, and C, Instructor D stated that he was a facilitator as well.

_Instructor D:_ More facilitator. Like I would go, when we’re speaking, I wouldn’t try to give them a very concrete-like structure of whatever they were learning. So I would do things like start a conversation about politics, the current political story. And because everybody has their own opinions and what not, I would tell them to share with the class.

Instructor D continued to exemplify how he guided, managed, and organized discussions.

_Instructor D:_ Okay. Like I was saying, I would start conversations about very, what do you call, very controversial subjects. So because each student has their different opinion from one another, they had arguments, which was good because it allowed
them to practice their English. And they would argue with each other. So I would ask them a question about like what do they think about the effect of Western culture on Chinese youth? So each one of them had a different opinion, and, you know, different ones had kids so they would come with their own experiences and argue from those points. And these arguments kind of, without them noticing it, you know, without them being aware of it, they were expressing themselves with emotion rather than expressing a very, very mathematical idea. So they’re expressing more emotion than, you know, talking about the contract. It’s easier to speak about a contract than it is to express emotion. So I think I was a facilitator as far as that, allowing them to kind of be more emotional with their English.

From instructors’ statements, they understood that they were playing a role of a facilitator who mentored and guided learners to accomplish their learning in the instructional program. They encouraged learners to take responsibility for learning and were not an information or knowledge provider for learners.

*Instructors’ Competencies for Online SCMC Spoken English Instruction*

With the needs of rapidly shifting technology and the extensive embrace of Internet technologies, Kern (2006) suggested that more approaches besides traditional principles and pedagogical techniques are needed to meet the growing complicated and several goals, contexts, and problems in CALL study. However, improving or mastering essential skills for each technology cannot promise effectiveness or success in web-based spoken English teaching. In the present study, the instructor’s understanding of essential
competencies for an instructor to facilitate an effective instruction were obtained. They also explained and elucidated why they think those competencies were so important.

_Instructor A: Definitely computer competency [is essential]. I was not familiar with any of the programs (Skype, Adobe Connect, Audacity, Moodle) prior to teaching the course. I was kind of learning as I went and that affected my confidence early on in the instruction, and so it wasn’t until I felt like I was becoming a little more comfortable that I think the classroom experience went better. So definitely computer competency. Organization I think is just an absolute. We talked about the use of Moodle, and I think it’s very important to lay as much out to the students prior to the class session so that class time could be focused primarily on the session topic. The more that I could provide them with prior to coming to class, the more we could maximize our time together. So I think organization skills, flexibility. That’s not a competency, but I think that’s definitely necessary for online instructors. And then just communication. And again this isn’t a competency, but I’d say that personality is a huge plus because there’s so much richness lost in the method of delivery._

Instructor A thought having strong computer competency, especially the skills needed to execute the instructional program, could make her feel more comfortable and confident when she delivered instruction. Besides, organization and flexibility of instruction and communication are another two essential skills for an instructor’s teaching in an SCMC environment. Instructor B mentioned technological-savvy, but he
emphasized the importance of techniques to spur learners’ involvement and interactivity with each other in class.

Instructor B: They [Instructors] definitely need to be comfortable with technology. That’s one big thing because they not only have to know what they’re doing, but they may have to explain to the students or visualize what the student may be having problems with. So that’s one big thing. They should be flexible. A lot of times I think people taking these courses have a lot going on and they’re not always able to be as prepared, so sometimes it may require them to be flexible. Let’s see flexible, um, and they should just have a good understanding of, you know, how to teach, okay, and how to get people involved, how to get the students to be interactive.

Instructor C also reaffirmed those of the major competencies mentioned above, namely technology savvy, organization, and common skills. In addition, he added that being an effective online instructor requires good management skills.

Instructor C: You definitely have to be techno-savvy. I mean that’s a key. If you’re not techno-savvy I think you’re going to get overwhelmed by just all the technology that’s around. You need to be a great communicator. You just need to be able to communicate in all different types of medium. You definitely have to be organized. If you’re not organized, your Moodle, it’s just going to make it harder for the learners to do stuff. You know they’re not going to be able to get the information they need. And when you’re uploading stuff to Moodle, when you’re doing everything else, you need to have some sort of organization or you’re going
to be spending too much time. I think a lot of instructors will spend just as much
time doing the classroom management as they do the classroom teaching. So you
have to be organized, and I think finally you have to be a good manager. You have
to manage everything that goes on with what you do and as well as with what the
students are doing. You have to manage everything. If not it’d be tough to be an
online teacher. If you didn’t have at least those four competencies, I think it would
be very, very tough.

Instructor D emphasized the skills of instructional strategies, good command of
speaking, and computer and technological literacy.

*Instructor D:* I think you have to be, on instructional strategies or using different
type of theories, I think you have to be, I mean you have to be well-rounded. You
have to use every different kind, and you can’t be set in stone in one way. I think
you have to be diverse. The strategies I used with this class probably won’t be the
same as my next class or any other class after that . . . . I think it depends on the
instructor’s, like I guess, sort of holistic experience with that spoken instruction
other than, like, academic experience, as far as just the spoken English cause that’s
what we’re talking about. I think it’s the competence. I think it has to do more with
the person’s, like, actual ability to speak. I’m not saying that an instructor should
have just the knowledge of speaking . . . . I would say just at least, I mean, some
sort of general knowledge of communication, like, some communication
software, . . . I think prior to actually teaching the class, I think the instructor has
to have some sort of technological literacy, some computer literacy. Yet, not every
program. The thing is that most of these programs are similar to each other, right?

So if they have some knowledge of it then they can figure out how to use another program. So I can say that that they should have some very extensive knowledge in different technology.

From instructors’ understanding of the demands of skills for a real-time, web-based spoken English instruction, the essential competencies are recognized and divided into the general domains of technology, pedagogy, and psychology. Those competencies include: computer competency, organization and flexibility of instruction, management of instruction, communicative skills, pedagogical strategies, and skills to guide learners to be more involved and interactive.

Instructors’ Experiences with the Learning Activities within the Curriculum

In the study, the instructors adapted curriculum templates which were designed on the basis of both Vygotsky’s sociocultural theory and communicative teaching language approach. According to Vygotsky’s theory (1978), humans indirectly act with the physical world while using tools or labor activities to change the world. Languages constituting symbols and signs provide a holistic tool for humans to mediate and regulate relationships with others in different social and cultural contexts. That is, “the human mind the mediated” (Lantolf, 2000, p. 1) is the central concept of sociocultural theory. Besides, Vygotsky extended the concept of sociocultural theory and discovered that humans use tools to interact with other people (interpsychological level) in social contexts to achieve higher psychological functions before those functions are transferred within themselves (intrapsychological level). It is called zone of proximal development
(ZPD). The concepts of mediation and ZPD have already been adapted for foreign and second language acquisition to increase interaction through a collaborative learning environment.

In addition to Vygotsky’s principles, the communicative language teaching approach (CLT) emphasizes language as a functional system to convey meaning between interlocutors. The central concept of CLT highlights the point that language should be learned via use and communication between learners and learners, and learners and instructor in class. Most importantly, learners can apply what they learn in class to real contexts in their daily life. Based on the concept, Littlewood (1981) argued that communicative activities in class should provide learners with more opportunities to extend associations with meaning that will later help them apply this language for communicative purposes.

In the present study, the researcher used both Vygotsky’s theory and the CLT approach as the crucial theoretical framework to design the curriculum and learning activities for the instructional program. All instructors adapted the learning activities—discussions, role playing, scenarios, interviews, and concept mapping—within the curriculum. These types of activities have been deemed effective activities to increase learners’ interaction and communication in different educational settings (Sullivan, 2000). The following findings in subsections interpret the two major principles, Vygotsky’s sociocultural theory and CLT, used in the SCMC language teaching context. In general, all instructors in this study thought that the curriculum, lesson plans, and learning activities worked well together to create a learner-centered environment.
Instructor C: I think they [curriculum and lesson plans] were pretty well put together. They definitely were what we would call student-centered, so they were focused on trying to get the students to learn and to speak . . . . Um, in general, I thought they [curriculum and activities] were good. They seemed to be designed, again, with having the students in mind, and the activities set up to allow them to work with their English. So that was nice.

Enhancement of Interaction and Communication Based on the Curriculum and Learning Activities in an SCMC Environment

An SCMC system is a communicative vehicle in which interactions and communications occur between participants (i.e. instructor to learners, learners to learners) in a web-based setting (Lee et al., 2007; Miller & Miller, 1999). Lee et al, (2007) found that interactivity is one of the significant variables for an effective SCMC instruction for spoken English learning. The importance of interaction has been a hot topic of research in online and distance education supported by mediated technology (Garrison & Anderson, 1998; Wilson, 2004). Sims (2003) pointed out that the paradigm of social constructivism derived from Vyogostkian sociocultural theory asserts that “interactive learning, as achieved by the process of communicating electronically, enables the learners to actively construct their own perspectives which they can communicate to a small group” (p. 33). Stacey (1999) argued that a regular online interaction in small collaborative groups could provide extremely effective learning at a distance.
In the present study, small groups were formed to increase opportunities for all participants to interact and communicate more with learners and learners, and learners and instructor. Instructors facilitated each class based on the curriculum and learning activities with varied pedagogical strategies. They recognized that the learning activities fostered learners’ interactions and provided learners more opportunities to communicate in class. Instructor C described his experiences:

Instructor C: Most of the time it was me, me and the students, the students to me. But every now and then the students would interact and talk with each other during class, yeah. A lot of times, you know, just different things like that. And I think they started doing that more as the quarter [instructional program] went on.

Instructor C stated that the shift occurred from a learner-to-instructor interaction to more learner-to-learner interaction as he expected.

Instructor C: Yeah, yeah, there were plenty of opportunities for group activities for the students to talk with each other, and yeah, there were definitely plenty of those. Just, you know, there always seemed to be a group activity scheduled. So, I mean, it was really easy to just break up the class into some groups and let them converse for 10-15 minutes. And it would give them time to interact and talk about things. And then we kind of met back together. I think that gave them an environment that had plenty of interactions to speak more.

Instructor C agreed that the curriculum and activities provided learners opportunities to interact with each other. Instructor A stated how she understands her
experience with the implementation of the learning activities to allow learners to interact more effectively with each other through her facilitation.

Instructor A: We were discussing business, both formal and informal expressions and the use of those and the body language. And so the one learner would talk about how he would often offer a cigarette or cigarettes and wine to someone and that doing so seems to be a sign to that person of now you’re my friend. It’s an outreach in the sense of friendship. And so the other learner would say, you know, yes, exactly. I’m a non-smoker. And whenever that happens in business situations, I often smoke a cigarette and sit and enjoy a glass of wine. One would often comment on what the other student had said. There was also a class about business etiquette and there was a discussion where one learner offered a motto like a motto of business and explained what that motto meant. And the other learner said, “No, actually, that’s the right expression, but that’s not the right interpretation of it.” And then he went on to provide his interpretation of that particular business motto. And so those are two situations where they would disagree with one another.

Instructor A’s understanding of interaction through learning activities attributed to the curriculum design that was based on Vygotsky’s sociocultural theory. She stated:

Instructor A: And so it [curriculum] was designed for interaction and communication with each other... The role play scenarios obviously were primary to the were primary for the students to interact and communicate with each other. I think the curriculum was well put together because it allowed for sort of role playing for each student because not all of them were in the same
room so that kind of allowed a little bit more personal association between the students.

Instructor D elucidated how the scenario activity within the curriculum provided opportunities for learners to interact with other learners.

_Instructor D: I do think so because it’s not very rigid. It’s not just English based. Um, like, I said, like the story lines and the little, like, acting out sequences, they allowed the students, they sort of used their imagination more not to have to rely on just academic English. For example, I told them that any language is best used or more easily learned when you’re outside of an academic surrounding, and you just speak to people, and you need to actually do something. So say in a market place, you need to communicate with people. So you would have a scenario dealing with the market place or dealing with the business place or just dealing with being in public but not something that is just class oriented. I led them in that way; it helped them use their imagination to think of a practical, you know, a practical use for English instead of just the classroom._

From the participant observation, it was recognized that if the instructor kept interpreting some concepts without involving learners’ discussions, it would develop into a lecture-like situation. That is, the teacher spoke more, and learners interacted less. The situation occurred in the beginning of the instruction with a teacher who had never taught a real-time, web-based spoken English course before. At first, most of the time he introduced the key terms and concepts without retrieving learners’ prior knowledge and without allowing learners to engage in the activity. Consequently, the class proceeded in a
teacher-centered, lecture-focused context. Learners wrote about the situation in their weekly reflections and claimed more opportunities to speak. Eventually, the teacher noticed his weakness and learned from the experiences of other instructors in the weekly professional development meetings. Based on feedback from the observations and learners’ suggestions, those activities sometimes would not achieve the goal of allowing all learners to speak more. Another problem was that some learners meaninglessly occupied most of the time by talking too much, so the discourse only took place between a specific individual and the teacher. Importantly, learning how to distribute and manage time to provide an equal opportunity for learners to interact and communicate in class may positively influence their learning.

Naturally, the more interactions that occur in the process of learning, the more communications take place between learners and learners, and learners and instructors. Obviously, the instructors realized that the assigned learning activities could provide more opportunities for learners to interact and communicate with other learners only when they spoke less and learners spoke more in class.

*Discourse in Online Class as a Mediational tool for Spoken English Development*

According to Vygotsky’s sociocultural theory, human use language which institutes symbols, signs and sounds to indirectly interact or communicate with the physical world to mediate and regulate their relationships with other individuals in order to construct knowledge and share experiences. This viewpoint has been introduced to SLA and FL to examine how discourse mediates cultural meanings through symbols and signs which will affect learners’ learning and cognitive development (Lantolf & Aljaafreh, 1995; Hall
In the present study, instructors and learners came from different cultural and social backgrounds which allowed them to share their experiences and knowledge with others. It could help learners to not only acknowledge but also appropriately and correctly use the target language in different social and cultural settings. The following discourse from Instructor D’s class indicated how the instructor and learners use language to mediate knowledge and convey thoughts:

Instructor D: How is the formal and informal expression used in English? A lot of them which are ...unn... slang... Learner 6 (Yes). Can you define slang?

Learner 6: Unn..., slang?

Instructor D: Yes, s-l-a-n-g.

Learner 6: Ok. I think it is a kind of informal language, a dialogue, or a statement...

Instructor D: So, slang is pretty much informal language and people call it a street language. It’s called because it is casual. You know? It’s very casual, so it’s used often by people who are not in the professional field as far as workload. So, let me give you some expressions, some common American slang expressions. Unn... stuff. Have you ever heard stuff before?

Learner 3 and 6: s-t-u-f-f?

Instructor D: s-t-u-f-f. Yea. So, tell me what do you think the meaning of stuff is? How do you use stuff in a sentence? Learner 3, could you use stuff in a sentence?

Learner 3: I cannot [do not] understand the actual meaning... unn... stuff?... slang?

Instructor D: But, just give the formal, stuff... So, ok, I said that I stuffed my bag.
Learner 3: I stuffed my stomach. Ok!

Instructor D: Ok, it’s a good one. So, stuff in the informal situation. Stuff, like a ...unn... you are working, ok, you are a student; teacher assigned a lot of work to do. So, when I talked to learner 3 and asked what are you going to do tonight. He said...unn...I am busy. I have a lot of stuff to do. So, lots of stuff means a lot of things to do. But, it is used informally. So, stuff means a whole lot of things to do.

Instructor D: Workaholic. Learner 6! Could you use workaholic in a sentence?

Learner 6: Unn...workaholic?

Instructor D: Yhea, workaholic. Have you ever heard it before?

Learner D: No, I never heard it before.

Instructor D: But, you’ve heard alcoholic, right?

Learner C and D: Yhea...

Instructor D: So, what do you assume workaholic? Since alcoholic means a man is addicted to alcohol, what is the work workaholic? What is a workaholic addicted to? I will write it down on the Adobe for you.

Learner 6: Work very hard?

Instructor D: Yhea. Workaholic means that someone is addicted to work which is the same as alcoholic means someone is addicted to alcohol.

From the discourse, the instructor and learners were discussing two words of slang used as informal expressions. They used a form of language to convey the meaning and usage of two words in a certain social and cultural setting. Learners learned the correct meaning and usage from the discourse and would use them orally in correct and
appropriate context and situation in the future. From the discourse, learners mental
development had achieved when they could cognitively gave a correct answer or example
to the concept that the instructor presented. For example, when the instructor implied the
meaning of alcoholic which referred to a man who is addicted to alcohol. Learner 6 could
understood the meaning of the word, workaholic, and said that “it means that [someone
work[s] very hard. Another example from the discourse is that Learner 3 put the word
stuff in his own sentence, “I stuffed my stomach.” to reflect the instructor’s example, “I
stuffed my bag”.

The semiotic mediation could be identified from the following discourse when the
same instructor and learners continue discussing the usage of slang and body language:

_Instructor D: Learner C, could you give me an example about how do you use
informal expression?

Learner 3: Yes, in my home I use informal expressions to my wife and my little
boy. I just call the name of my wife.

_Instructor D: Do you call your son’s nickname?

Learner 3: Yhea.

_Instructor D: As I know, my father gave me a nickname. It’s very informal because
it is very intimate. It’s a very intimate situation where you use informal expression
you use in speech. So when my father calls me, I know that he’s speaking to me. He
will use my nickname. Learner 6, do you have any example? Do you have any
experience using informal language?
Learner 6: If I play baseball or basketball with my friends, if I’ve know them since high school and I’ve known them well, I will just call them, Hey, Men! Sounds like that. I won’t call their names. That’s my example.

Instructor D: Ok, it’s good. So, along with formal and informal language, it’s always hard to pick because it is always there, you know. Unn...when you talk with your boss. You said, Hey, boss. Sort of informal, but you are still talking with a superior. Correct? Unless you are very very familiar with your boss, people tend to not call his boss by his first name. Sort of sign of respect and superiority because he has the power to fire you, right? So, you don’t want to defend him.

Instructor D: Give me an example when you physically interact in an informal setting. How do you physically interact or communicate with people when you are in a business meeting?

Learner 6: For example, to see straightly, and have eye contacts with the presenter.

Instructor D: Right. Learner 3, could you give me an example how do you use body language in a business meeting?

Learners 3: Yes, in China we often use hand shaking with other people in a business meeting. When we meet someone, we usually shake hand with him/her with our right hand.

Instructor D: Ok, I think that it is universal. Shaking hands is a very universal action, you know. If someone coming from Sudan, before shaking hands, people usually tap on other people’s right shoulder. Before shaking hands with a people’s grandfather, grandmother, or a superior person, we usually tap their right
shoulder. That’s sort of formality. It’s formal. Is it common to see people to shake hands in China?

Learners 3: Yes, we use hand shaking instead of hugging.

In this discourse, Learner 6 gave an example to show how he used informal expression regarding how he called his wife instead of her name. The instructor pointed out how his father called his nickname to show the intimate relationship between them. Learner 6 indicated that he usually used informal expression, like “Hey, men”, instead of calling his closed friends’ names when they met. From the examples, the earners not only shared how to use informal expressional language in different societial context, but also learner knowledge via cultural meanings. The following example in this discourse could clearly indicate the use of semiotic mediation for spoken language development and sharing of cultural meanings. The instructor would like the learners to give an example of how they would physically interact or communicate with other people in an informal or a formal setting, like a business meeting. The learners pointed out the use of eye contact and shaking hands. The instructor gave an example of how people from different country and culture would use different way of shaking hands with different people.

In short, from the examples above discourses were found as a medational tool to socialize learners in to target language learning in pragmatically and culturally rich contexts. The discourses showed how these kinds of contexts could provide for learners with opportunities to experience how language is exactly used outside of the class.
Meaning Conveyed and Negotiated through Discussion within Activities

SCMC’s features maintain discourses among interlocutors to convey their thinking, negotiate the meaning of words, and cooperate with others to complete their learning activities. In a communicative language teaching (CLT) environment, learners are encouraged to convey functional meaning through interaction and communication. Based on this concept, the curriculum and learning activities were designed to increase interaction and communication, so rich meaning conveyed and negotiated by learners and instructors were expected to happen in the process of learning.

In this study, each instructor adapted different approaches to implement each activity to facilitate discussions in which a lot of opportunities were embedded to promote negotiation and conveyance of meaning for learners. All of them recognized that when they provided opportunities for learners, learners were able to convey knowledge and meaning to achieve their learning goals.

Instructor C: Well, I just had to change my teaching, too. I had to change how I delivered things. A lot of it too, was when I gave people, when I gave students the assignment, was just kind of remind them, you know, as you’re reading through this, jot down questions. Jot down things you don’t understand. Jot down opinions you disagree with. Jot down things you agree with. And that kind of got them going, you know; they kind of wrote down, hey I saw this word. I think it means this, but it doesn’t make sense to me. And that would give an opportunity for other students to help that student out, too.

Besides providing opportunities for learners, instructors understood that stimulating
discussions in class promoted learners’ involvement and engaged learners more in the learning process. Moreover, rich meaning and knowledge occurred, and was negotiated and conveyed within discussions.

*Instructor C: I tried to use the discussion forum as much as I could just to try to continue the classroom discussion . . . . I think the discussion forum is great cause, you know, you can do some extra collaboration there . . . . You can pose those questions on the discussion forum and kind of continue that classroom discussion without being in the classroom . . . . I had to kind of encourage the questions and maybe not really refer to them as questions, kind of refer to them as concerns, ideas, you know, just, you know, just things that they would bring up in discussion because it was going to help the discussion, too. In the beginning, you know, when students come to class without any questions or concerns or ideas about the stuff they read about it doesn’t make the discussion go quite, too, it doesn’t flow that well. Again, you know, I think just by, you know, having them gather that information and bring it to a discussion, I think that helps establish collaboration . . . . I just tried to structure it so, you know, during discussion we tried to do as much collaboration as we could.

The following conversations extracted from the recording of a class by the participant observer occurred between the learner and one instructor. This dialogue shows how participants interacted and communicated with one another to negotiate meaning among them. The topic of this discussion on globalization.

*Instructor B: You have information about global villages, and would you please
share your opinion about what’s the advantage and disadvantage about it?

Jane: Another thing I want to say is, like politicians like this discussion about economy. With globalization, Chinese and foreigners can go together, work together, and in a company, you will see Chinese, Indian, American, and England [people] like that.

Learner 5: Yeah.

Jane: Especially, in Shanghai, you can see in some companies, a lot of foreigners and Chinese work together. In that kind of company, we [people] can learn from each other. . . because in some companies of China, the management work not very well, so we want to learn a lot of management theories from the foreigners. But now as we work together, we have learned a lot from foreigners, but I think in companies, foreigners can learn things from Chinese, too.

Xia, Pang-Deng: Yeah.

Jane: My sister is in a company; her company is an American company. She is working with a lot of colleagues. One day they come to China, and they can learn a lot from their Chinese colleagues [mispronunciation]. In Chinese culture, we have a lot of things we are using nowadays in a company. In Chinese culture, the president wants to be. . . how to say. . . harmonious. . . yeah. . . harmonious is very important for Chinese.

Ziv: How to work together without conflicts.

Jane: How to say. We want harmonious between person to person, and between society and nature. Sometimes foreigners will say Chinese people want
harmonious but how do you do. I want to say as a Chinese people, when we grow, our parents will say you must be harmonious with other persons. It’s a symbol?

Yes, No. Hisn Tiao (Chinese Mandarin)?

Instructor B: Say again. What was the word?

Learner 5: I think Jane means is . . . Jean! I think you mean is the people from over the world, from different cultures, or countries can know about each other frequently. The country and country can know more and more.

Jean: Yes.

Instructor B: Right, so we can know each other.

Learner 5: Umm . . . Jane, I don’t understand the word you said. You Said . . . “Colle…” [mispronunciation]?

Jane: What? Which word?

Ziv: She said, “colleague [mispronunciation].” The people who is working with you in the office. Right?

Jane: Yeah.

Learner 5: I see. Thanks.

The discourse in this discussion showed that learners and the instructor communicated with each other to share their understanding of the term, globalization. Obviously, the negotiation of meaning occurred during the conversation when mispronounced words were questioned and explained. Besides, each speaker tended to use words, phrases, and sentences to convey his/her meaning to the listeners. The listener used queries, rephrases, and confirmations to express how much he/she understood the
speaker’s meanings. The act of negotiation of meaning ended when the meaning was understood by all listeners in this conversation.

_ZPD and Scaffolding in a Collaborative SCMC Environment_

Negotiating meanings and building up knowledge between the learners revealed that learners often collaborate with other learners to achieve the objectives themselves. This observation implies that learners need assistance mediated by negotiation of meanings, constituting semiotics in dialogues with other learners or the instructor to improve their oral competence. This also reflects and supports Vygotsky’s concept of self-regulation and zone of proximal development which indicates that “learning is not something an individual processes alone, but is a collaborative endeavor necessarily involving other individuals” (Aljaafreh & Lantolf, 1994, p. 480). In the present study, instructors realized that they should offer a learning environment which allowed learners to manage their own learning through activities facilitated by the instructor, that is, in a learner-centered context. Instructors offered learning activities to serve as an authentic social context for learners. Those learners who had a lower level of oral skill tried to obtain help from other learners or the instructor in order to achieve the learning objectives. This phenomenon disappeared when the lower-level learners achieved the learning goals without scaffolded assistance from higher-level learners or the teacher. Vygotsky interpreted this type of shift as self-regulation. Observations of the instruction and the dialogues among learners and the teacher revealed this phenomenon. Take Instructor D’s class, for example; he introduced formal and informal expressions in spoken English to learners:
Instructor D: Mannerism depends on our culture outlet. Give me an example of mannerism, okay? Mannerism could be . . . umm . . . I speak sometimes with my hands to express what I am trying to say, or I change my facial expressions. So, these are mannerisms. Mannerisms help us make our points more clear. So, Learner 6, could you give us an example of mannerism?

Learner 6: If you use your hands to make your points more clear.

Instructor D: Yes, body language . . . gestures.

Learner 6: When you do the presentation, you use a laser pointer to make your presentation more clear. Is that kind of a mannerism?

Instructor D: No. Because what the mannerism focuses on is yourself, your body, the way your body moves, your voices and sounds. Okay? Another vocabulary word that goes along with this is diction. So, when I am angry, I sound different than when I am not angry. When I am angry, I speak in a loud voice. When I am not angry, I speak in a quiet voice. When I am trying to explain something to you, I use my hands. I do more of this, you know, move my hands around trying to make my points. So, mannerism focuses on yourself, your own body, how you move. It's not like a laser pointer that's an external behavior; it's all about internal functions.

Learner 6: OK. I see. So, if somebody knows you, you may raise your hand and shake their hand.

Instructor D: That's a good one. That's definitely a mannerism because it expresses what you feel physically.

From this discourse, the instructor interpreted the concept of mannerism and
provided an example for learners to extend the application of formal and informal expressions in a real and specific context. The instructor requested that the learner offer an example. However, the learner did not comprehend the concept of the term, so he failed to give a correct one. Although the learner made errors, the instructor started with presenting him a focal phrase, body language, and clarifying the concept with examples. Consequently, the learner comprehended it and offered a correct example. That is, the learner gained scaffolded assistance from the expert, the instructor, to construct knowledge and improve his spoken skill.

Moreover, Instructor C found that learners provided support to their peers during collaborative interaction to not only enhance their oral skills, but also motivate students to participate in speaking activities as a cognitive tool to construct their knowledge.

*Instructor C:* At the end of the quarter you would hear students helping other students with their spoken English, and they would correct them. If somebody pronounced something slightly wrong, you know, they would say, “hey, you know, isn’t it pronounced this way” or something like that. Or if somebody was talking and they, you know, people, you know, you forget, you know, oh what’s the word for this? Sometimes somebody would, a lot of times they would just type it in, type it into the chat and kind of help them out with the words.

Instructor A stated how she used learning activity to guide learners to become involved in online peer collaboration to work on tasks or activities?

*Instructor A:* I think so because we assigned scenarios between groups so each person would have a partner, and they would be required to stay in contact with
one another and then work on whatever scenario that they had so that the next meeting they could act it out. I knew that they would have to actually work together that the one who knew better English would practice his own English because he would have to explain something to this student, and this student would learn in processing his English. So I would make it to where they had no choice. They had to figure it out. It was like giving them a puzzle and then they had to figure out the puzzle, you know.

**Summary**

The curriculum and learning activities were designed on the basis of two substantial paradigms, Vygotsky’s sociocultural theory and CLT. All instructors used the curriculum and learning activities to facilitate learning and found that some important elements associating with the two theoretical frameworks from their instruction. Those include: establishment of learner-centered learning environment, enhancement of interaction and communication, negotiation of meaning through discussion, and ZPD and scaffolding in peer collaboration for tasks or activities.

In the present study, in addition to the instructor’s understanding of the use of SCMC for spoken English instruction, the following findings reveal how learners understood their experience of taking the spoken English instruction in a real-time, web-based environment.
The Learners’ Experiences of Taking the Spoken English Instruction in an SCMC Context

All learners stated that they never took real-time online spoken English before, nor had they ever used any SCMC system for learning. They all had been studying English since they were in junior high school, and as far as they were concerned, they were weak in English oral communication skills. The English language education in their country is more focused on form and reading, not necessarily focused on English speaking and listening. Consequently, they all voluntarily took this online class even though they were all busy with their jobs throughout the duration of the instructional program.

Learners’ Perceptions of Web-Based and Face-to-Face Language Learning Environment

The learners in this study were all employees of either a government enterprise or a private training center in China, so they had to work weekdays. In spite of working all day, most of them chose to take class after work, and sometimes a few of them could not attend the class on time due to their heavy work schedule. As mentioned, all learners had studied English as a foreign language since they were a junior high school student, and they never took an online course until they participated in this study. Namely, they had been studying in a traditional classroom many years, or some of them had even attended class in a laboratory with a few multimedia infrastructures. Consequently, all learners thought that the use of SCMC for this instructional program was valuable and experienced no significant difference in achievement from the traditional face-to-face class.
Learner 6: I think [that] the tuition and learning outcomes of a face-to-face environment and the SCMC system are similar.

From the learners’ experience in this real-time online spoken English course, they understood that convenience and flexibility were two major reasons that they were willing to take this kind of format for learning. Since the learners were all full-time employees, time and geography were the top concerns for them taking an online class.

Learner 1: This way, the learners did not need to rush to certain places to take classes. I took this course at home with my computer connecting to the Internet ... I think it was more convenient and comfortable to take classes online at home than in a face-to-face classroom—I could drink water when I felt thirsty; I could look up phrases I did not know with my computer or search information on the Internet to help myself express some ideas while I was taking the online classes.

Learner 2: If I do not have much time for learning, online classes is my first consideration since I can schedule my learning. Time is the most important consideration.

Learner 3: If I had sufficient time and money, I would choose to take traditional spoken English courses. If I did not have sufficient time, I might choose to use the SCMC for learning because I would prefer to use money to buy the valuable time. For the learning purpose, both money and time was very valuable; I would prefer to use the SCMC for learning.
Learner 4: If your English has reached a higher level and you want to keep learning English, you can choose online learning which is more effective since you don’t have to travel to different places.

Learner 5: I think people like me, who have jobs, may prefer to use the SCMC for learning. I will mainly consider the time and convenience when I choose a class. In my case [having to travel to another city to take a master’s program sometimes], I do not have much time to transport to another place to take classes.

Learner 6: I think [that] compared to a face-to-face environment, the SCMC system provides a more flexible learning approach in terms of time and space.

Learner 7: Online learning is convenient since sometimes I was too busy to go to a class. As far as efficiency (expenses) is concerned, learners will pay less for an online learning program.

Based on the considerations of time and geography, learners took class after work or on weekends. They were willing to spend time studying on weekends and considered the class as a way of life-long learning to improve their language competence. In addition to time and convenience, learners recognized that taking class online was not as easy as in a face-to-face environment due to some limitations of online learning. They stated that the Internet connection was one limitation that affected interactivity and communication in class and caused a lack of authenticity found in a traditional classroom environment.
Learner 4: Although face-to-face is better than online learning, I feel that online learning can be a better solution if we cannot study in a face-to-face context. However, I felt that online learning lacks the feeling of authentic context due to the connection speed.

The need for body language and facial expressions resulted in the insufficiency of authenticity in the context of online learning.

Learner 4: It is hard to provide images and comprehend the dialogues since it lacks the use of body language, especially for the beginners.

Learner 1: I think in a face-to-face environment, learners could use facial expressions and body language to help themselves understand the course content.

One learner stated that it was difficult for the interlocutors to communicate with one another closely in online learning. It can be understood that though learners can see and listen to other learners in a class session, a distance – both real and psychological -- exists among them.

Other important findings from learners’ understanding of the difference between the two settings for their learning were that teachers might have better control over students’ overall progress and simulate different contexts of real life in a face-to-face environment. However, web-based learning is more convenient with abundant and useful information and with resources both accessible and reachable. A more interesting finding is that one learner realized that one’s willingness to learn is a very important trait because learning is more demanding in an online environment. A learner must be willing to ask
questions or ask for help; otherwise, the instructor will not even know how to provide assistance. Most importantly, online learning not only provides another way for communication and interaction in a face-to-face context, but also promotes interaction among learners.

*Learner 5: Comparing to face-to-face environment, I felt that I would have more intentions to express what I had and I’d not worry about much when I interacted with other people. I didn’t have to worry about being laughed at when I made a mistake, and I knew that there was a distance among learners, so I would not meet them in real life after class. I could feel that I was more active in this online class.***

Most learners stated that they prefer to attend class in a face-to-face environment rather than in an online learning environment if time, expense, and geography are available for them; though, the latter one has its strong points.

*Use of SCMC Technology for Learning*

Since all learners expressed that this was the first time for them using an SCMC system for spoken language learning, they might need time to become accustomed with each technology before or in the initial stage of the formal instructional program. Having progressed from the stage of unfamiliarity to the stage that they were capable of using those technologies for the instructional program, they all were positively impressed with the SCMC system for the real-time, online spoken English learning. (The major SCMC systems included Skype and Adobe Connect.) All learners used both systems together when they attended the class. They also used a course management system (Moodle) and audio editor software (Audacity) to work out learning activities and course preparations.
Learners found both strong and weak points with the different software, but they had a positive attitude toward the use of the media for learning.

*Internet Connection as a Factor for Online Learning*

Promoting interaction has been a hot topic in increasing negotiation of meaning among participants (Lee, 2001; Yamada & Akahori, 2007), motivation of learning (Lee, et al., 2007), and effectiveness of instruction (Rovai & Barnum, 2003) in a real-time, web-based environment. According to Vygotsky’s sociocultural theory (1978), humans use semiotic mediation in social systems to construct all facets of knowledge. People use any kind of tool as mediators to convey their thoughts to one another and initiate their activities in the sociocultural system. SCMC is one of the major mediators for learners to allow them to interact with one another. Therefore, the effectiveness of an SCMC system can directly affect interaction among all participants in class. In this study, most learners stated that the SCMC system had some minor problems (e.g., Internet connection) which did affect the operation of the SCMC systems and effectiveness of learning.

*Learner1: The most important problems we need to overcome were the technical problems—unstable software and Internet connections.*

*Learner 5: However, I don’t think we used all the functions there efficiently. For instance, due to the Internet speed, the audio and the video were not synchronous. If we only used the audio functions, we could not know what other participants were doing in class.*

The Internet connection required a highly capable computer and network. From the
learners’ statements and participant observation, the lower the proficiency of a computer and wireless connection a learner had for the class resulted in a lower quality Internet connection. From participant observation, the technical problems mostly came from the learner’s side. Some learners were using a laptop with constrained memory space which could not support the performance of images and media. Some learners were using an intranet network or wireless with slow connection at their company or home. Some problems were able to be solved immediately, while others took longer to fix.

Learner 2: …the problem was not solved immediately. The reason might be because I was far from the other side where someone could help me easier. Although I tried two different web-cameras, I failed. I tried to request help from my classmates, but we did not make it out. It was probably because of the compatibility issue with the hardware on my laptop and the whole system.

Learner 6: I used the wireless connection in class, so I would get disconnected sometimes. I think there might be something wrong with my Internet system……When I activated both audio and video functions in Adobe Connect, I lost the quality of sound in Skype. I think it was because I did not have sufficient bandwidth in my computer to support the two systems running at the same time.

The technical problems, most importantly, would affect the learners’ perception of taking an online language class to a certain degree.
Learner1: This issue would become worse if we encountered the same technical problems because we had to spend a lot of class time fixing the technical problems. For example, at the beginning of the classes, we spent about half of the class time solving the problems of the voices or software. I thought solving technical problems wasted our learning time as well as had a negative impact on our learning enthusiasm. There were unpredictable technical problems on laptops and software happening in the process of learning which interrupted the class and decreased my energy and motivation for learning.

Problems with the Use of SCMC and Course Management Systems for Learning

Skype and Adobe Connect were selected by the researcher as the main SCMC systems for the instructional program which allowed participants to teach and learn through audio and video in a real-time, web-based environment. Moodle was operated by all instructors to manage and organize their instruction. Moreover, learners were required to use Audacity which is an audio editor program to work out learning activities after class. The learners used these systems and software for the first time during this class; consequently, they encountered some problems which might or might not have affected their perception of using these or relevant systems for language learning in the future.

From the learners’ interview, participant observation, and responses to open questions in the course evaluation, the main problem was the technical problems encountered.

The technical problems were mostly Internet disconnection or instability. When the Internet connection was not working properly, it resulted in sound breaks or delays, delayed or frozen images, or lagged or failed uploading.
Learner 4: Beside, the images sometimes were delayed due to the poor connection.
Learner 5: The video functions in Adobe Connect never worked properly for us. We could not use audio functions in Adobe Connect well to communicate with each other in class . . . . I have no idea what the problem was. I even tested the video functions with another classmate, XXXX, before class. However, we could not see each other via the video functions anymore beginning with the first class and throughout all the remaining classes.

In addition to the technical problems affecting learning, the compatibility of the hardware and software was another problem for learners. Each learner had tested each system with the instructor and technology support group before the first class; however, only the main functions had been tested then. Besides, although the researcher had sent the equipment requirements to each learner, learners may have already owned (and used for the instructional program) a laptop or computer which did not meet the requirements. Consequently, based on the participant observation, some learners who were using a Mac operation system encountered the problem of not being able to take the pre- and post-test online. Some of them logged on to the Moodle system, but had abnormal interface which did not allow them to locate the correct button to upload files or navigate to a right web page to complete their assignments online. In group B, the instructor was using a Mac computer to deliver instruction, so he could not directly invite learners who were late for class or who had to exit the class temporarily for trouble-shooting to join/rejoin the class session. He had to disconnect and redial all learners. The class was definitely interrupted, and it really affected learners’ learning.
Another problem encountered concerned troubleshooting. Because learners attended the class at varied locations, it was difficult for them to acquire help immediately or to solve the problem without someone beside them directing them through the steps. Although at least one assistant in the technology group observed each class and tried to assist learners and the instructor in dealing with any technical problems, it was hard for the assistant to know exactly what the main problem was on the users’ side. Such a dilemma did affect learners’ learning in this study, especially in the beginning of the formal classes.

Use of SCMC as an Early Adopter

Although SCMC has been adapted for language teaching and learning for a period of time, it is still in the initial stage. In this present study, learners were all first-time users of an SCMC system and other media to learn spoken English online, so the SCMC system for them was novel technology for learning. In fact, they did not have the option to determine what type of system they were willing to use, but instead agreed to install and learn how to use the systems required for the instructional program. Consequently, how learners understood their experience of using the systems could be an important index to acknowledge if they plan to keep using these systems or others for online learning in the future.

According to Roger’s Diffusion of Innovation theory (2003), there are two types of communication channels (i.e., mass media, interpersonal) for participants to share and create information with one another to achieve mutual understanding. Most importantly, the channels allow participants to construct knowledge of innovations, form and change
attitude toward new media, and decide to adopt or reject a new media. Roger pointed out that the time of diffusion includes three phases: the innovation-decision process, the adopter categories, and the adoption rate. The innovation-decision process includes five steps: knowledge, persuasion, decision, implementation, and confirmation. Roger classified the adopter as innovators, early adopters, early majority, late majority, and laggards. The rate of adoption refers to how fast a member of a social system adopts an innovation.

According to Roger, the stage of knowledge (the beginning stage) means that an individual seeks an innovation and is eager to acquire information and functions in light of the innovation. An individual mentally forms a favorable or an unfavorable attitude toward the innovation based on relative advantage, compatibility, and complexity in the stage of persuasion. When an individual engages in activities and considers whether to adopt or reject the innovation, the stage of decision occurs. After an individual determines to adopt an innovation for specific purposes, an individual practices and implements an innovation with obvious behavior changes and new ideas. That is, an individual is on the stage of implementation. For most adopters, they will terminate in this stage, while some will move forward to the stage of confirmation when they encounter conflicts with the use of an innovation. For example, if an innovation is so complicated that an individual takes time to accomplish the specific purpose, an individual might accentuate the decision to use an innovation or reject it depending on the degree to which the reinforcement of an innovation-decision has already been made.
In this study, it is somewhat difficult to identify which stage that the learners had already been because they did not have a choice in determining which system they liked for learning. They had to adopt the systems which were selected by the researcher. However, they did undergo the stage of knowledge, persuasion, decision, implementation, and confirmation. They all stated that they found some strong and weak points with the systems, but were impressed with the SCMC systems for spoken language learning in general. They all agreed that they would like to adopt the systems for learning, especially when the systems could be improved in the future.

Learner 1: I did not use the SCMC system for learning before. After taking this course, I think the effectiveness of using the SCMC system for spoken English learning was noticeable . . . . I think [that] using the SCMC system for learning was at its initial trial stage which needed some improvements.

Learner 2: It was great to use these systems for spoken English learning for Chinese learners who feel it is difficult to speak in English. They have no confidence in speaking English at first, but they can have more opportunities to speak if they use these systems for their learning . . . . I felt good using these systems; each system has its strengths and features.

Learner 3: My general impression of using the SCMC for learning was nice, but it still needed some improvements, such as the usage of software . . . . I might choose to use the SCMC for learning because I would prefer to use money to buy the
valuable time. For the learning purpose, both money and time was very valuable, I would prefer to use the SCMC for learning. I think using the SCMC for learning was effective sometimes.

Learner 4: Although face-to-face is better than online learning, I feel that online learning can be a better solution if we cannot study in a face-to-face context.

Learner 5: I think people like me, who have jobs, may prefer to use the SCMC for learning. I will mainly consider the time and convenience when I choose a class. In my case, I do not have much time to transport to another place to take classes. Using the SCMC for learning allows me to search information from a variety of resources online. I will take a well-organized online English course when I consider English is very important to me for examinations at work . . . . Overall, the quality of systems used in the process of learning is good. I like the integrations of different systems in learning.

Learner 6: On the other hand, the SCMC system is convenient for people who have to work during the day time to study English. I will choose to take English courses in either a face-to-face environment or the SCMC system depending on my working conditions, I think compared to a face-to-face environment, the SCMC system provides a more flexible learning approach in terms of time and space. I think the
tuition and learning outcomes of a face-to-face environment and the SCMC system are similar.

Learner 7: All systems were new for me, and I felt that they were good to use . . . . Honestly, if the software and hardware for online learning are set up and operate well, I think online learning is a better way.

Based on the learners’ understanding of the use of the SCMC systems for the instructional program, they did actually adopt the SCMC systems for learning, but they might choose to adopt the systems again in the future depending on their specific needs. Besides, according to Roger, the role of adopter is divided into five groups in terms of the speed of an individual’s adoption of new innovation relative to other members in a social system. Innovators are those who like to take risks and adopt a new technology for its own sake and who are venturesome in exploring new ideas. They have to be able to leverage a high degree of uncertainty regarding an innovation at the time of adoption. For an early adopter, an individual will take any information from innovators to determine whether he or she will adopt an innovation or not. An early adopter will significantly influence other individuals because of his or her well-informed decision-making on an innovation. The next group, the early majority, deliberately adopt an innovation when the technology is fully tested, and some advantages of it can be easily recognized. The late majority are those who skeptically or reluctantly accept an innovation because the innovation might not be favorable for them. They are usually forced to adopt an innovation under peer pressure or for the sake of necessity. As for laggards, they resist an
innovation and consistently question it. They are usually very traditional and isolated in a social system.

In the present study, learners were recognized as early adopters because they took the SCMC systems to a specific situation that was important to them for spoken English learning. They accepted the researcher’s data and information in light of the systems and started learning and being familiar with the systems in the process of learning. They were not only satisfied with the systems and stated that they would like to use it for online language learning in the future, but also said they were likely to refer other individuals to the systems and course. After all, the number of individuals adopting the SCMC system is not considerably large to date. The learners in this study could be a model and be respected by other members in a social system because of their deliberate and cautious decision to adopt the systems for spoken language learning.

Learner 1: I did not use the SCMC system for learning before. After taking this course, I think the effectiveness of using the SCMC system for spoken English learning was noticeable . . . . I think using the SCMC system for learning was at its initial trial stage which needed some improvements . . . . It was good to use the SCMC for learning when learners could access the Internet connection to take online spoken English classes without the limitations of space . . . . Of course, I will. I think learners in this course may not be able to realize their English improvement immediately. However, if the learners continue to study English in this model, they will notice the improvements in their English abilities. Of course, I will recommend this course to my friends if they have free time and the desire.
Opportunity for Interaction and Communication

According to Vygotsky’s sociocultural theory (1978), humans use tools as a mediation to negotiate and convey meaning, so they can construct knowledge and share experiences together in a social system. In addition, no individual’s mental development can be achieved without assistance through interaction from other people in society with higher mental functioning development. Vygotsky proposed the Zone of Proximal Development to argue that the novice cooperates with the expert who can assist the novice from the intermental plane (social interaction) to the intramental plane (thinking and performance) to form concepts and acquire knowledge. When the novice can direct himself/herself to solve problems and accomplish tasks without assistance from the expert, Vygotsky regards the shift as self-regulation. It is clear that the meaning of negotiation, the shift from potential development to actual development (ZPD), or self-regulation occurs because an individual interacts and communicates with other people in the process of activities in a society.

The research literature in light of the importance of interaction in web-based distance education is copious. Many researchers proposed and supported that interaction is a significant factor affecting the effectiveness of online learning (Swain, 2002; Vrasidas & McIsaac, 1999). In general, the degrees to which learners are satisfied with online teaching depends on the quality and quantity of interaction. As for the learning in the SCMC environment, real-time audio and video functions promote interaction among interlocutors to achieve their specific goals. Using SCMC for language teaching and
learning effectively depends on how an instructor can construct an interactive environment for learners (Lee et al., 2007).

In the present study, the instructional program was designed to provide opportunity for learners to interact and communicate more with other learners and the instructor through learning activities based on Vygotsky’s theory. Through rich interactions and communications, learners would be able to collaborate with other learners to improve their spoken English. Consequently, most learners agreed that the instructional program actually provided opportunities for interaction and communication because of the curriculum and learning activities.

Learner 6: The curriculum did provide more opportunities for me to interact and communicate with my classmates. Lessons such as role playing and scenarios increased my vocabulary and enhanced my communication skills in daily life. For example, I could express myself better and catch up with the tempo of discussion with my foreign customers in phone conferences. I could apply what I had learned in class to my daily life.

Learner 1: I would interact with other students when other learners and I had questions on the discussions. I think the online course was different from a traditional course. The online course provided the learners more opportunities for oral discussion. When there was something I did not agree with or I did not understand, I could ask other students in time. I interacted with the instructor and other students by asking each questions. I think that was the strength of this online
course. I think it was good. I think the course design was nice as well. I liked the main purpose of this course which improved the learners’ ideas on communication and sharing.

Learner 1 realized that course design and personal willingness to engage in discussions increased interactions with other learners and the instructor. As for the course design, he recognized that learning activities promoted interaction and communication in class. He stated:

*I found role playing activities most interactive and communicative in the course. I think most of the course content only required the learners to make restatements.*

*The instructor asked the learners to rephrase the course content. I think these kinds of activities were not very rich and extended. It only required the learners to deliver what they understood about the lessons but not to have further reflections on matters and to express their ideas in discussions. However, I think it was necessary because in this way, the instructor could understand if the learners caught the main points of the lessons.*

He also acknowledged the need for personal motivation:

*Therefore, learners should prepare for the lessons and get familiar with the class materials in order to express their unique thoughts briefly and smoothly rather than boring opinions with mistakes repeatedly. This way, the learners in this course would have more motivation to participate in the class discussions.*

Another learner shared positive thoughts regarding more interactions and communications in the instruction program as well. He stated that the instructor’s
pedagogy strategy allowed learners to share their views with other learners without constraints.

*Learner C, Leon:* Of course, I think the main instructional strategies of this course were to provide more opportunities for the learners to interact and communicate with each other. For example, after Learner 6 who was from Taiwan joined our class, the classmates from China enjoyed the time exchanging ideas with Learner 6. I think because all of us were similar ages, we had many similar viewpoints. I did not expect that we would have so many things in common. We could even be open-minded and talk about the sensitive topics between China and Taiwan. I think that was what we liked to see in class.

From the participant observation, the instructor usually guided learners to focus on one topic and express their viewpoints in the process of discussion. The instructor also offered continuing questions to encourage learners to extend the discussions. Namely, each learner could express his/her views more. That is, interaction and communication increased.

*Learner 3, Leon:* Most of the time, the instructor would prepare a topic for us to discuss in class. In the process of discussion, all the learners would express their ideas first. During the student discussion or after the student discussion, the instructor would express his own viewpoints. All of the participants would discuss all of the opinions expressed by others. Some of the participants would agree with the same opinions, but some did not. If some participants could convince the other participants of their opinions, all the participants would have consistent
viewpoints. If not, we would respect the diverse viewpoints. It was very valuable that the learners could practice how to express their ideas in English through the process of discussion.

Interaction and communication were increased relevant to the curriculum, course design, and learning activity. From the learners’ understanding, they thought that the most interactive and communicative learning activities were role-playing, discussion, and scenarios.

Factors Affecting Interaction and Communication

Although most learners agreed that they had opportunity to interact and communicate with other learners or the instructor in the SCMC environment, some of them also indicated some difficulties in proceeding with interaction and communication in class. These factors can be categorized as technical problems, pedagogical strategy, and learners’ perspective. Technical problems related to the Internet connection and video function. The Internet connection was sometimes not stable because of the selection of wireless or cable connection by users. The user’s broadband usually affected the quality of speed of connection in the process of learning. The selection of a desktop computer or laptop computer also influenced interaction and communication in class. When the Internet connection lagged, some images froze and some voices broke. Some learners were even forced to log off the class and then reconnect to the class to remedy their connection problems.
Learner 1: If the video functions had gone smoothly, we would have had better learning outcomes, communications, and interaction in class because we could have noticed other participants’ reactions and facial expressions in a timely manner.

Learner 5: Adobe Connect offers a lot of functions in its interface; however, I don’t think we used all the functions there efficiently. For instance, due to the Internet speed, the audio and the video were not synchronous. If we only used the audio functions, we could not know what other participants were doing in class.

Learner 6: When I activated both audio and video functions in Adobe Connect, I lost the quality of sound in Skype. I think it was because I did not have sufficient bandwidth in my computer to support the two systems running at the same time. It was not a difficult problem for me. I could fix the problem by upgrading my bandwidth . . . . I used the wireless connection in class, so I would get disconnected sometimes. I think there might be something wrong with my Internet system.

Although Adobe Connect’s video function allowed social presence and body language embedded in discourse to support interaction and communication, the size of the image was limited, depending on the number of participants and the structure of the learning activity. The more participants, the smaller the images would be. When the instructor was using the Whiteboard function to make a presentation or to introduce concepts, the images were minimized to meet the needs of the learning activity.
Consequently, the missing social presence decreased another way of interaction and communication.

*Learner 7: The images on Adobe Connect were not big enough to show all presenters and participants in class.*

*Learner 3, Leon: In my opinion, I do not think the video camera enhanced English learning effectively. I think people can learn English well via a whiteboard and a headset. The video cameras could only help the participants to understand each other's meanings more clearly but could not enhance the learning. Since the window of the video camera was not big, it was not easy to see the motions of other learners' bodies clearly. I think the first step to learning a language is to understand it by listening even though it is necessary to have the ability to use body language (e.g., gestures) to communicate with other peers.*

*Learner 4: For Adobe Connect, it has its constraints. For example, the users are required to be seated to communicate with other people, so they can only see other people's head. Besides, the images sometimes were delayed due to the poor connection. In this respect, the system could not conquer the problem of using body language in an online class.*

In addition to technical problems, pedagogical strategy also affected the opportunity for interaction and communication of learners in the process of learning.

From the participant observation, it was recognized that if the teacher kept interpreting
some concepts without involving learners’ discussions, it would develop a lecture-like situation. That is, the teacher spoke more, and learners interacted and communicated less. The situation occurred in the beginning of the instruction with a teacher who had never taught a real-time, web-based spoken English course before. At first, most of the time he introduced the key terms and concepts without retrieving learners’ prior knowledge and without allowing learners to engage in the activity. Consequently, the class proceeded in a teacher-centered, lecture-focused context. Learners wrote about the situation in their weekly reflections and claimed more opportunities to speak. Eventually, the teacher noticed his weakness and learned from the experiences of other teachers in the weekly professional development meetings. The interaction oftentimes was limited by some learners who meaninglessly occupied most of the time by talking too much, so the discourse only took place between them and the teacher. Importantly, learning how to distribute and manage time equally to provide an opportunity for learners to interact and communicate in class positively influences learners’ learning.

Less interaction and communication might also be attributed to the learner’s perspective of the learning activity. Some learners passively expressed their viewpoints because of the choice of topics. If the topics of the learning activity did not interest them, they either felt they had nothing to share or they passively waited for questions from other interlocutors. When this situation occurred, the interaction and communication would be limited to only the instructor and some specific learners.

Learner 2: The instructor usually gave us some topics in advance. If I was interested in the topic, I would spend a lot of time on it and practice what I wanted
to say in class. So, when we had a discussion in class, I was oftentimes active. On the other hand, if I was not interested in a topic, I was usually playing very passive. During the discussion, I passively participated in the discussion. So, it depended on what topic we were going to discuss.

However, it is hard to meet all the needs of learners. An instructor is supposed to adopt different strategies to encourage learners to participate in discussion to enhance interaction and communication. The following suggestion from a learner could be an example:

Learners 5: It is good to have interactive class activities. I think it would be nice if each class could open a period of time for the learners to talk about the topics they are interested in after covering all the course content. For instance, the learners could talk about their questions they encounter in work at the end of the classes to extend the course content. I understand that it is hard for the courses to meet all the goals/expectations of the learners, especially the courses in the traditional elementary schools and high schools. However, the courses at the university level or higher should be more flexible to help the learners prepare themselves well for their jobs and careers. The courses should provide different levels and sections for different learning goals/expectations. It is necessary to use different teaching strategies to deliver the knowledge and guide the learners to reach their learning goals/expectations.
Learning second or foreign language in an SCMC environment can be different from a face-to-face or SCMC environment because of the degree of presence, the degree of interaction, or other aspects. In this present study, learners realized that the role of learner, learning method, and perception of learning are varied in other environments.

Learners’ Role

In this present study, most learners recognized that they had to more actively participate and interact with other participants or instructors. They realized that the more they did participate and interact, the more opportunities they had to make an improvement in the process of learning through frequent negotiation of meanings and knowledge construction. According to Vygotsky’s socioculture theory, each individual needs to interact and communicate with other individuals in a social system to build up knowledge and accomplish specific purposes. Based on this concept, each learner should actively engage in activities in a social context, while passively acquiring knowledge from other individuals. Besides, learners in the communicative language teaching environment should be a negotiator who is supposed to be responsible for their own learning process and objectives within each learning activity. They are supposed to contribute as much as he/she learned and, thereby, learn independently (Breen & Candlin, 1980). Learners are the center of learning and responsible for their own learning with a positive attitude and appropriate learning approaches (Richards, 1990).

Learner 1: I perceived my learning role in an online context as a participant as well as a student. I would like to learn as much as I expected from this course. The
reason why I said I perceived my learning role in an online context as a participant was because unlike in a face-to-face environment in which instructors have to talk and learners have to listen quietly most of the time, I had a lot of opportunities to interact and communicate with other participants in this online context. I liked to be a participant in class having chances to express myself.

The learner understood that only as he became a participant could he have more opportunities to interact and communicate with other participants, which was different from the face-to-face environment. Consequently, he could learn as much as he expected in class.

Learner 3: I spent more time on preparing for my classes and participating in class than reviewing my classes after class. I prepared for my classes by reading the required course outlines and course materials. I would come up with my own perceptions, ideas, and questions when I prepared for my classes. In class, I would express my ideas as much as possible and exchange my ideas with the instructor and classmates.

Although the learner did not directly and specifically state what role he played in class, he, in fact, positively engaged in learning activities and contributed himself as much as possible in class. That is, he understood that he was supposed to be responsible for his learning. Learner 4 stated that if she wanted to learn well, she should be “willing to learn” and “spend time on learning.” She always prepared for each class. The following learners shared their understanding of their role in class which was similar to the previous learners.
Learner 5: I perceived my learning role in an online context as a learner sharing my viewpoints and learning from other classmates. Being different from the traditional learners who participate in class passively, I played an active role sharing my ideas in class. . . . I cherished the opportunity to take this online context because there are very few courses like this available here. In class discussions, I liked to actively think about the questions as well as listen to other classmates’ viewpoints. I also liked to share my opinions, no matter if they were correct or not. In the process of learning, I realized that as long as I was willing to talk, my instructor and classmates would try to understand me without laughing at the mistakes I made.

Learner 6: I actively participated in an online context because the conversations with the instructor and classmates in an online context were very intense. I had to be focused in order to understand the questions the instructor or classmates asked or the key points they mentioned. In this learning environment, students have to be more active in expressing ideas, asking questions, and listening to other classmates’ opinions.

Overall, learners perceived themselves as a provider, sharer, and active participant in the SCMC spoken English instructional program. They realized that learning was their own responsibility. That is, they had to actively organize and participate with learning activities. Furthermore, their understanding of the experiences in learning was that they could learn more and make improvement if they were willing to learn. Based on this
understanding, they actively grabbed rich opportunities to interact and communicate with other participants, speaking more in class as a result.

*Learning through Scaffolding and Collaboration*

The concept of scaffolding derived from Vygotsky’s Zone of Proximal Development concept refers to assistance for a peer who is unable to accomplish or perform a task independently provided by a more capable learner or teacher. That is, a learner engages in learning at his/her current level of knowledge or skill until the learner no longer requires assistance from another learner or teacher. This type of learning promotes collaboration between learners and learners. Nyikos and Hashimoto (1997) pointed out that collaboration is a sub-concept of ZPD, and Lee (2004) suggested that web-based collaboration can benefit non-native speakers through linguistic scaffolding which is the relationship between expert and novice. In an SCMC web-based learning environment, Okuyama (2005) argued that collaboration is one of the strong factors affecting the interaction. In this type of environment, cooperative learning is facilitated and learners help one another to solve problems and construct their own knowledge through collaborative tasks.

*Learner 1: Other learners helped me to construct knowledge and improve my oral competencies based on the learning activities. Sometimes, I could learn how to phrase a sentence in a better way by listening to other learners’ conversations. I could also learn new and unique ideas from other learners. At the same time, I would like to help other learners, too.*
Learner 2: I think that other learners could help me construct and increase knowledge through learning activities in class, for instance, their learning approaches, how they make improvement, their learning shortages, and their feelings about the use of language. Those were very helpful for me because the purpose of taking this class for me was to learn language. In addition, their different viewpoints on some topics were increasing interactions among us.

Learner 6: In class discussions, other learners helped me to construct knowledge of different countries and cultures. I also helped other learners to construct knowledge as well, particularly in the last class. In the discussion about traveling in different countries, I shared the information regarding Internet services’ prices and usages in different countries.

Generally speaking, learners did help one another with problem-solving and knowledge sharing in the instructional program. One substantial finding from the learners’ understanding is that the learning activity was a major element which promoted collaboration and scaffolding in the process of learning. The learning activities built on the concept of ZPD and scaffolding, and communicative teaching approach not only guided learners to learn by way of collaboration, but also promoted interaction and communication in which the meaning of negotiation was embedded.

According to Donato (1994), capable learners provide assistance for other learners when they are collaboratively carrying out tasks “in ways analogous to expert scaffolding documented in the developmental psychological literature” (p. 51). In the present study,
learners acknowledged that they all needed peers’ assistance to improve their spoken competence in a collaborative context.

Learner 3: Yes, the classmates would remind each other of mistakes on phrases or pronunciations. As we know, it is not polite to correct other people's mistakes in regular conversations. However, in the process of learning, it is necessary and important to remind each other of mistakes so that all of the learners would have better learning outcomes. I realized some pronunciation and grammar mistakes by myself in the process of learning. I would often pronounce a new vocabulary word incorrectly due to the habit of pronouncing English words by my own feelings. I could tell my pronunciations were not correct by hearing other people’s responses. If the people did not understand me, I would correct my pronunciations until they could understand me. It was an effective way to improve my English.

Learner 6: It depended on the level of other learners. One of the learners in my class who was at the advanced English level helped me to construct knowledge and improve my competencies by sharing his opinions with fluent English. I could learn how to express myself in a better way as he did.

Another example that occurred between the instructor and learners was found through participant observation of a class session. The following discourse shows how the learner received scaffolded assistance from the instructor to build up knowledge and improve his spoken competence.

Instructor D: Mannerism depends on our culture outlet. Give me an example of
mannerism, okay? Mannerism could be . . . umm . . . I speak sometimes with my hands to express what I am trying to say, or I change my facial expressions. So, these are mannerisms. Mannerisms help us make our points more clear. So, Learner 6, could you give us an example of mannerism?

Learner 6: If you use your hands to make your points more clear.

Instructor D: Yes, body language . . . gestures.

Learner 6: When you do the presentation, you use a laser pointer to make your presentation more clear. Is that kind of a mannerism?

Instructor D: No. Because what the mannerism focuses on is yourself, your body, the way your body moves, your voices and sounds. Okay? Another vocabulary word that goes along with this is diction. So, when I am angry, I sound different than when I am not angry. When I am angry, I speak in a loud voice. When I am not angry, I speak in a quiet voice. When I am trying to explain something to you, I use my hands. I do more of this, you know, move my hands around trying to make my points. So, mannerism focuses on yourself, your own body, how you move. It’s not like a laser pointer that’s an external behavior; it’s all about internal functions.

Learner 6: OK. I see. So, if somebody knows you, you may raise your hand and shake their hand.

Instructor D: That’s a good one. That’s definitely a mannerism because it expresses what you feel physically.
**Self-Regulation**

In previous sections learners pointed out that they learned a way of collaboration and scaffolding which allowed them to negotiate, share, and construct knowledge with other peers. According to Nyikos and Hashimoto (1997), collaboration is a sub-concept of ZPD and assumes that “interaction in the collaborative tasks is necessary precondition for engaging in self-regulation” (p. 507). That is, learners engage in learning activities and deem learning as their responsibility as it relates to cognition and behavior. Based on this concept, the concept of self-regulation is formulated and can be seen as well in the process of learning. Schunk and Zimmerman (1998) defined self-regulated learning (SRL) as “learning that occurs largely from the influence of students’ self-generated thoughts, feelings, strategies, and behaviors, which are oriented toward the attainment of goals.” Besides, goal-setting theory (Latham & Locke, 1991), control theory (Carver & Scheier, 1998), social cognitive theories (Bandura, 1997), motivation theory (Higgins, 1998), regulatory pride (Higgins et al., 2001), and self-efficacy (Bandura, 1997) were employed by many researchers as the theoretical frameworks interrelated with cognitive, affective, motivational, and behavioral aspects (Zeidner, Boekaerts, & Pintrich, 2000). The primary attributions of self-regulation are in terms of self-reference, motivation systems, goal frameworks, and related affective and cognitive attributes.

In the present study, learners recognized that they were learning in a different way from the traditional face-to-face environment, which has been presented in previous sections. All learners voluntarily took the web-based instructional program because they thought they were weak in spoken skills, and it was difficult for them to attend class in a
traditional environment. Besides, most of them were selected by their organization to have training in an English-speaking country, so their decision to attend this instructional program was obvious, though they had their own specific objectives in the process of learning. One learner stated that he needed to learn English better even though he had studied if for many years because he “lacked training in English speaking and listening skills.” He realized his deficiency and tried to search for a way to meet this need. He again described that he “look[ed] forward to having a proper environment to improve my English speaking and listening skills.” From his statement, the learner clearly knew his needs and goals before he took the instructional program, and he was “glad” that he could have the opportunity to attend the online class. His intrinsic motivation might be what sustained his commitment throughout the learning. Motivation is one of the important attributes to self-regulation in an online environment (Lynch & Dembo, 2004). Pintrich and Schunk (2002) argued that motivation known as an important factor influencing online learner autonomy interprets why learners determine to carry out learning.

Self-Efficacy and Goal Orientation

Self-efficacy and goal orientation are the two major components that maintain learners’ motivation in the process of learning. According to Albert Bandura’s social cognitive theory (1995), self-efficacy is “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (p. 2). That is, learners maintain belief in their capabilities to manage, control, and accomplish their learning. For example, in the present study, it was the first time for all learners to use the SCMC system for language learning. Consequently, it was a challenge for them in such a
short time to become familiar with all media needed for learning. However, they did learn how to use the necessary systems and application software, how to solve technical problems, and how to seek help for the technical problems in the process of learning.

Learner 1: We still need to figure out the reasons why some learners could not open the files on Moodle or upload files to Moodle. We also need to find solutions to the problems of image delay and voice breaking. The most important problems we need to overcome were the technical problems – unstable software and Internet connections.

Learner 6: I am good at computers so I have not encountered any technical problems in the process of learning . . . . The biggest audio problem I encountered was I lost the quality of sound after I activated the video function. Sometimes I had difficulty hearing the conversations between the instructor and classmates clearly. The quality of the sound would be better after I turned off the video function. When I activated both audio and video functions in Adobe Connect, I lost the quality of sound in Skype. I think it was because I did not have sufficient bandwidth in my computer to support the two systems running at the same time. It was not a difficult problem for me. I could fix the problem by upgrading my bandwidth.

From the learners’ statements, although they encountered some technical problems, they selected to deal with them individually or with peers. Because of self-efficacy, they could continue to actively participate in learning activities and negotiate with the course contents until the end of the instructional program. According to Wang and Newlin
(2002a, 2002b), both self-efficacy for course content and self-efficacy for technology are significant predictors to learner performance in an online class. Although learners thought that their spoken English skills were weak, most of them were satisfied with the instructional program, and it did meet their expectations. One learner (Learner 6) stated “I reached my learning goals and expectations . . . . Studying in this course helped me reinforce my spoken English skills.” The result supports a study by Zhang, Li, Duan, and Wu (2001) that self-efficacy positively associates with self-regulatory learning skills as well as learner goal orientation. The learner (Learner 6) was satisfied with the goal he reached based on what and how he participated in the class throughout the instructional program. The intrinsic goal orientation and belief in accomplishment of tasks formed the learning motivation and promoted the learner’s autonomous learning in the learning process.

Management Course and Learning

In addition to the cognitive aspect, in practice, how learners manage and control their learning is also a major element of self-regulation. An autonomous learner knows how to manage time and course content. In this present study, learners realized that learning in an SCMC environment was quite different from the traditional face-to-face environment. They understood that they had to effectively and actively prepare for, participate in, and review each course so that they could make an improvement and achieve their learning goals.

Learner 6: I actively participated in an online context because the conversations with the instructor and classmates in an online context were very intense. I had to
be focused in order to understand the questions the instructor or classmates asked or the key points they mentioned. In this learning environment, students have to be more active in expressing ideas, asking questions, and listening to other classmates’ opinions. The mode of learning in Taiwan provides few similar opportunities. I would prepare myself for lessons before class. This helped me to understand the class discussions and catch up with other classmates. I was actively doing so. When I prepared myself for lessons before class, I would check the class materials posted by the instructor. I would go over the class content and relevant instructional videos. Sometimes, I would watch the videos first which helped me enhance my listening skills as well as perceive different viewpoints. After class, I would prefer to focus on studying the vocabulary. As I mentioned, I would use software to note new vocabulary words and review them after class. There were some practical articles posted on Moodle. I would read them sometimes.

Learner 1: Being a student in this course, I think it was necessary to actively study the course content posted on the Moodle in order to learn the lessons well. If the learners did not get familiar with the course content, the quality of the class would decrease. There would not be nice interactions between the instructor and the learners. The class would not proceed well, either. The use of the SCMC system changed the mode of learning. The learners had to make efforts to learn by themselves instead of relying on the instructor only. The mode of learning in the SCMC system was different from the one in a face-to-face environment. The learners in the SCMC system could learn more only when they actively spent time
and energy studying the course materials and participating in the class activities. Learner 3: I spent more time preparing for my classes and participating in class than reviewing my classes after class. I prepared for my classes by reading the required course outlines and course materials. I would come up with my own perceptions, ideas, and questions when I prepared for my classes. In class, I would express my ideas as much as possible and exchange my ideas with the instructor and classmates. We would talk about the different perceptions of cultures or other areas among the participants. We would emphasize the diversity of English usages and mistakes. It was necessary to complete the assignments. However, I think the assignments in this course did not have significant effects on learning since the instructor did not require us to complete the assignments strictly, as the students were busy with work and did not have sufficient time to complete the assignments. Even though the assignments were highly relevant to the course content, the learners would choose to complete them or not based on their learning habits. I learned well when I prepared for my classes and actively participated in classes. I would rather review my classes step by step than intensely. People learned in different ways.

Learner 5: Using the SCMC for learning allows me to search information in a variety of sources online. I will take a well-organized online English course when I consider English is very important to me at examinations or work. I think Audacity is very helpful because I can use it to record and listen to my English repeatedly at
anytime. I can find out my mistakes or weaknesses through using Audacity.

From the learners’ responses, it is obvious that they were responsible for organizing their learning depending on the different situations and their needs. They took different self-regulation strategies to make their learning better. One learner (Learner 5) mentioned that “[i]t was a pity that sometimes I did not have time to review the lessons after class due to my tight schedule. Sometimes I did not have the extra time and energy to prepare for this course.” The learner used the word “pity” to emphasize the importance of learning autonomy for an online language learner. The learner thought that she voluntarily participated in the instructional program, so she had the “responsibility” to attend each class without delay. She said that “I would feel embarrassed or disrespectful if I was absent for no excuse.”

Finally, from the learner interviews, learners did not only learn by themselves, but they also sought help from peers when challenging problems arose. They all thought that they should seek help from other learners or resources to solve problems with technology and course content as well. They built up their own learning assistance management to promote their learning. This is a very important aspect for an autonomous distant learner (Hara & Kling, 2000; Wang & Newlin, 2002a, 2002b; Lynch & Dembo; 2004).

**Perception of Instruction and Curriculum**

Based on the literature reviews, little research specifically emphasized the design of a holistic CALL and SCMC. Researchers suggest that in addition to a general theory (e.g., behaviorism, cognitivism, constructivism), more other multiple or rare theories should also be employed to CALL education (Levy & Stockwell, 2006). In the present
study, the curriculum was designed on the basis of both Vygotsky’s sociocultural theory and communicative teaching approach as the theoretical frameworks for the instructional program. The purposes of adopting the two paradigms were to promote interaction and communication which had been regarded as substantial elements to mediate valued information and to construct knowledge in a web-based learning environment. All teachers were provided with the curriculum and lesson plans which included topic, objectives, academic/technology standards, learning sequences, and media. Accordingly, based on the curriculum, each instructor delivered instruction which followed the same schedule, but employed different pedagogical strategies to deliver instruction. Consequently, they taught relative to the diversity of the learner and kept their instruction more flexible to be most effective in meeting the needs of their learners. As for learners, all learners were notified the curriculum in which learning activities and schedule included before they voluntarily agreed to participate in the instructional program.

Initially, there were a total of sixteen learners enrolled in the class. Of the sixteen learners, fifteen took the required placement test before the first class. As a result, six learners were determined to be at the intermediate level; the rest of the learners tested close to the middle level. At the end of the instructional program, ten learners completed the course, and seven learners took the achievement assessment. The total average of the difference of the placement test and the achievement assessment is about 1.1 point (Table 1).
Table 1.

The Results of the Placement Test and the Achievement Assessment

<table>
<thead>
<tr>
<th>Learner</th>
<th>Placement Test</th>
<th>Summative Assessment</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Grade: 1-6)</td>
<td>(Grade: 1-6)</td>
<td></td>
</tr>
<tr>
<td>Learner 1</td>
<td>3.0</td>
<td>4.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Learner 2</td>
<td>3.5</td>
<td>4.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Learner 3</td>
<td>4.0</td>
<td>5.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Learner 4</td>
<td>3.0</td>
<td>4.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Learner 5</td>
<td>3.0</td>
<td>4.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Learner 6</td>
<td>3.0</td>
<td>4.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Learner 7</td>
<td>3.0</td>
<td>4.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Average of difference: 1.14

Although the table shows that learners made progress after their learning, some learners stated that the achievement was not “obvious” because the 7-week instructional program was somewhat short for them to perceive it, while some thought they had made great progress. However, some learners expressed that they felt more “confident” communicating with native-speakers of English now than they used to feel before.

*Learner 5: I think my spoken English skills have been improved significantly. First, I think I have more confidence in speaking English. Second, I think I have overcome most of the language barriers and feel more comfortable with speaking English. . . . In class discussions, I liked to actively think about the questions as*
well as listen to other classmates’ viewpoints. I also liked to share my opinions, no matter if they were correct or not. In the process of learning, I realized that as long as I was willing to talk, my instructor and classmates would try to understand me without laughing at the mistakes I made. . . . I think the instructor was very friendly. He built up all the learners’ confidence in speaking English. No matter if what the learners said in English was correct or not, he would say “good” to encourage them to go on expressing their ideas. I liked the way he did that. . . .

This course met my goals. For example, this course built up my confidence in speaking English. I think if a person refuses to speak English, he/she can never speak English well. This course also changed my thoughts. This course let me realize that as long as I am willing to learn, I can learn in a variety of ways.

Learner 4: It was great to use these systems for spoken English learning for Chinese learners who feel it difficult to speak in English. They have no confidence in speaking English first, but they can have more opportunities to speak and build their confidence if they use these systems for their learning.

From the participant observation, learners built up their confidence through discourses with other participants and by participating more in each class. Since the class was designed as a small group, learners had no choice but to actively engage in each class. As the learners became better acquainted with one another, their level of participation also increased.
A Curriculum to Promote Interaction in an SCMC Learning Environment

Learners in the present study recognized that the curriculum and learning activities provided them with rich opportunities to interact and communicate with other participants. Based on Vygotsky’s sociocultural theory and communicative teaching approach, learners learned by interacting with other participants in learning activities that provided real context for daily discourses. Through the rich interaction and communication in which negotiation of meaning was embedded, learners scaffolded reference and information from the participants who had higher mental development to construct knowledge until they could achieve their specific goals without assistance. In the process of learning, learners attended class on time, logged on to the course management system to preview and review the class, participated actively in learning activities, accomplished tasks through cooperative learning, and helped other participants solve problems and construct knowledge. It was clear that learners regarded learning as their own responsibility and learned autonomously.

Learner 2: I think that other learners could help me construct and increase knowledge through learning activities in class. For instance, their learning approaches; how did they make improvement; their learning shortages; and their feelings about use of language, those were very helpful for me because the purpose of taking this class for me was to learn language. In addition, their different viewpoints on some topics were increasing interactions among us.

Learner 3: I perceived the design of the curriculum was practical . . . . Of course, I think the main instructional strategies of this course were to provide more
opportunities for the learners to interact and communicate with each other. For example, after Learner 6 who was from Taiwan joined our class, the classmates from China enjoyed the time exchanging ideas with Learner 6. I think because all of us were similar ages, we had many similar viewpoints. I did not expect that we would have so many things in common. We could even be open-minded and talk about the sensitive topics between China and Taiwan. I think that was what we liked to see in class. . . . Yes, the classmates would remind each other of mistakes on phrases or pronunciations. . . . However, in the process of learning, it is necessary and important to remind each other of mistakes so that all of the learners would have better learning outcomes. The learners would be more willing to let their classmates correct their mistakes rather than other people. . . . I realized some pronunciation and grammar mistakes by myself in the process of learning. I would often pronounce a new vocabulary word incorrectly due to the habit of pronouncing English words by my own feelings. I could tell my pronunciations were not correct by hearing other people's responses. If the people did not understand me, I would correct my pronunciations until they could understand me. It was an effective way to improve my English.

Learner 5: For the design of the curriculum and lesson plans, I think most of the topics were very nice; however, due to the cultural diversity, sometimes I was not quite familiar with the topics. I think the curriculum did not provide more opportunities for me to interact and communicate with other people after class,
especially in work because my coworkers were not interested in discussing the questions I had. However, I think I had nice interactions and communications with my classmates in class. The curriculum did provide me more opportunities to interact and communicate with each other in class. I think the biggest help other learners gave me to improve my oral competencies was to provide me with a suitable learning environment – everyone spoke English to me. During my daily life, even though I have interest in learning spoken English, I do not have many opportunities to practice my spoken English skills since all the people around me speak only Chinese Mandarin to me. Therefore, I think the biggest advantage of this course was providing me an environment and opportunity to speak English.

Learner 6: I think the design of the curriculum and lesson plans were very practical and useful. The course consisted of many topics strongly relevant to our daily life. The curriculum and lessons were substantial . . . . The curriculum did provide more opportunities for me to interact and communicate with my classmates. Lessons such as role playing and scenarios increased my vocabulary and enhanced my communication skills in daily life. For example, I could express myself better and catch up with the paces of discussion with my foreign customers in phone conferences. I could apply what I had learned in class to my daily life . . . . It depended on the level of other learners. One of the learners in my class who was at the advanced English level helped me to construct knowledge and improve my competencies by sharing his opinions with fluent English. I could
learn how to express myself in a better way as he did. In class discussions, other learners helped me to construct knowledge of different countries and cultures. I also helped other learners to construct knowledge as well, particularly in the last class. In the discussion about traveling in different countries, I shared the information regarding Internet services’ prices and usages in different countries.

Learner 7: Definitely. The instruction was designed as very interactive, so we had more opportunities to interact and communicate with each other. We could meet the instructor online and interact with him. Consequently, I did have opportunity to communicate with him. Again, we had a lot of opportunities to interact and communicate with each other. Sure. They helped me improve my oral competencies . . . My classmates helped me with the use of appropriate expressions and when I could not understand and follow the instructor’s teaching . . . For general knowledge, I felt that the class was not difficult for me, but rather that it was easy. It seemed that we could comprehend the class and that we could learn from it. I actually did not have professional and intrigued knowledge. The instructor and classmates liked to help when someone had questions.

From the statements above, most learners recognized that the curriculum and lessons could provide them with more opportunities to interact and communicate with other participants. A variety of learning activities was at the center of the curriculum to orchestrate rich interaction and communication in the process of learning. Learners
pointed out that role playing, group discussion, and scenario activities were the most interactive and communicative activities that allowed them to speak more and improve their spoken English skills more in the process of learning. Some weaknesses and suggestions were shown as well.

Learner 3: We had role playing and group activities in the SCMC context. I liked both of these activities. I think even though we only had done the role playing activities two to three times in the process of learning, the learners could learn more useful and localized English dialogue through them. It would be better if there were native speakers participating in the role playing activities with the learners. In this way, the learners could listen to more unadulterated English. I think the learning results of group discussions were not very significant. It was very hard to catch each group’s viewpoints sufficiently through video cameras. Because everyone used the same channel, it was easy to interfere with group discussions.

Learner 6: Group activities did help such as role playing (for instance, being in a group with another classmate and playing different roles). . . . Class discussions were the activities I liked most in the course. I liked everyone in class sharing their various viewpoints and experiences. For example, when we talked about McDonald’s fast food, we discussed some cases regarding the nutrition facts labeling. I actively brought out my ideas by mentioning a case: an American brought a suit against McDonald’s because the food provided by McDonald’s
caused him to gain weight. Then we also discussed whether cigarettes should or should not have the nicotine label to warn people. At the end, we discussed the legal consequences companies would have if there were no calorie labels on their food. We all agreed that food should have calorie labels. The thing I did not like was that the materials posted on Moodle by the instructor were not very organized. It took me a lot of time to find the materials I needed.

Learner 3: There were only two learners in this class. I think the group activities, such as group discussions, were necessary because each group could express their opinions on certain topics or practice how to present certain characters in scenarios individually. Depending on the class activities and instructional goals, group activities in an SCMC context were necessary.

Learners’ Perception of Instruction

Learners attended each class facilitated by the instructors with different backgrounds and teaching experiences. Learners’ perception of instruction highly depended on how the instructor managed the course, delivered the instruction (based on differing instructional strategies), and executed the learning activities to help them achieve their learning goals. A course evaluation employed right after the conclusion of the instructional program revealed learners’ attitude toward the overall instruction. Composed by five constructs, the course evaluation assessed learners’ motivation in the instruction, learners’ technological savvy, effectiveness of the instruction, interactivity under the SCMC context designed by the instructor, and satisfaction with the instruction.
The results indicated that learners affirmed the instructional program to be effective
(Table 2).

Table 2.

*The Results of Course Evaluations*

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Technology</th>
<th>Motivation</th>
<th>Savvy</th>
<th>Interactivity</th>
<th>Effectiveness</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Valid</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>3.8571</td>
<td>3.7143</td>
<td>3.8000</td>
<td>4.0286</td>
<td>3.7429</td>
<td></td>
</tr>
<tr>
<td>Std. Error of Mean</td>
<td>.07636</td>
<td>.18443</td>
<td>.12344</td>
<td>.12671</td>
<td>.12884</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.20203</td>
<td>.48795</td>
<td>.32660</td>
<td>.33523</td>
<td>.34087</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>.041</td>
<td>.238</td>
<td>.107</td>
<td>.112</td>
<td>.116</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>.57</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>3.71</td>
<td>3.00</td>
<td>3.40</td>
<td>3.60</td>
<td>3.20</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>4.29</td>
<td>4.00</td>
<td>4.40</td>
<td>4.60</td>
<td>4.20</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>27.00</td>
<td>26.00</td>
<td>26.60</td>
<td>28.20</td>
<td>26.20</td>
<td></td>
</tr>
</tbody>
</table>
According to Table 2, the learners’ motivation in the instructional program was high; the mean is 3.86, and the standard deviation is 0.20. From the items within the construct, most learners agreed that taking a real-time, online spoken English program was a good experience for them (Table 3). They thought that taking the instruction was not a waste of their time (Table 4), and the flexibility of time and geography motivated them to take the instruction (Table 5). Most importantly, they all perceived that learning spoken English in a real-time, online environment was interesting (Table 6), and they enjoyed attending the class (Table 7).

Table 3.

Course Evaluation: Q1 (Motivation Construct)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>4</td>
<td>6</td>
<td>85.7</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>14.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 4.

Course Evaluation: Q2 (Motivation Construct)

It was time-consuming to take a real-time, online spoken English training program.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>3</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>85.7</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 5.

Course Evaluation: Q3 (Motivation Construct)

Taking a real-time, online spoken English training program allowed for greater flexibility, not dependent on geography and time.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>4</td>
<td>71.4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 6.

*Course Evaluation: Q4 (Motivation Construct)*

I was not interested in taking this real-time, online spoken English training program.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>6</td>
<td>85.7</td>
<td>85.7</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>14.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 7.

*Course Evaluation: Q6 (Motivation Construct)*

I liked learning to speak spoken English in this real-time, online environment.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>28.6</td>
<td>28.6</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>71.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As for the Technological Savvy construct, most learners thought that they could handle the technological problems themselves without help from other people and were confident in their ability to solve those problems (Tables 8, 9).
Table 8.

*Course Evaluation: Q8 (Technology Savvy Construct)*

I could handle the problems with computer and Internet connection during the class without help.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>3</td>
<td>14.3</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>85.7</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 9.

*Course Evaluation: Q9 (Technology Savvy Construct)*

I had no confidence with computer and Internet connection troubleshooting for this real-time, online spoken English training program.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>2</td>
<td>14.3</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>71.4</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The learners’ attitude toward the interaction between technology and instruction which was reflected in the Interactivity construct indicated that some learners had difficulty accessing the instructional system, management course system, or other resources through the Internet, while some did not encounter the same problems with accessibility during the process of learning (Table 10). Additionally, most of them did not have problems completing their assignments online on Moodle, the course management system (Table 11).

Table 10.

Course Evaluation: Q10 (Interactivity Construct)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
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<tr>
<td>3</td>
<td>3</td>
<td>42.9</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 11.

Course Evaluation: Q11 (Interactivity Construct)

It was difficult for me to work on assignments or discussion forums on the Moodle system.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>4</td>
<td>6</td>
<td>85.7</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The interaction between learners and learners, and learners and instructor was positive; learners helped other peers, and instructors adopted different strategies (e.g., clarifying objectives of learning to increase the interaction between themselves and the learners) (Tables 12, 13).
Table 12.

*Course Evaluation: Q12 (Interactivity Construct)*

I felt comfortable answering questions from other learners and the instructor.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid 3</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>71.4</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Total 7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 13.

*Course Evaluation: Q14 (Interactivity Construct)*

Clarifying the learning objectives by the instructor was helpful for me to complete learning.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid 1</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>85.7</td>
</tr>
<tr>
<td>Total 7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The learners’ attitude toward the effectiveness of instruction within the Effectiveness construct was positive, including the instructor’s use of the SCMC system for teaching (Table 14), strategies to promote interaction and outputs (Table 15), use of teaching materials and psychological strategy for encouraging participation in learning (Table 16), distribution of contents in advance to support learners’ learning (Table 17), and value of taking the instructional program (Table 18).

Table 14.

Course Evaluation: Q15 (Effectiveness Construct)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Valid</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>71.4</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 15.

*Course Evaluation: Q16 (Effectiveness)*

I could interact more and speak more with my classmates and instructor.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Valid</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 16.

*Course Evaluation: Q17 (Effectiveness)*

Providing teaching contents and materials in advance was not helpful in encouraging me to communicate more with my classmates and instructor.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Valid</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>57.1</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 17.

Course Evaluation: Q18 (Effectiveness)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>5</td>
<td>71.4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 18.

Course Evaluation: Q19 (Effectiveness)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Finally, in the Satisfaction construct, the results showed that most learners agreed that they were satisfied with the instructional program because they would like to continue using this type of system for future learning and refer it to other people (Tables 19, 20).
Table 19.

*Course Evaluation: Q23 (Satisfaction)*

I will continue using the real-time online system to improve my English oral competence.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>28.6%</td>
<td>28.6%</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>57.1%</td>
<td>85.7%</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>14.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 20.

*Course Evaluation: Q24 (Satisfaction)*

I will continue using the real-time online system to improve my English oral competence.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>28.6%</td>
<td>28.6%</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>57.1%</td>
<td>85.7%</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>14.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
All in all, the learners’ attitude toward the use of the SCMC for the instructional program in terms of the integration of technology with instruction was positive.

**Strengths and Weaknesses of Learning Spoken English in an SCMC Environment**

Although the overall learners’ perception of using the SCMC system for spoken English instruction was positive, they identified both strengths and weaknesses in the learner interviews and open questions in the course evaluation. The reported strengths included:

1. **Compatibility:** The SCMC system was compatible with other technologies in the instruction, for example, the course management system (e.g., Moodle) and the application programs (e.g., Audacity, Flash Player).
2. **Authenticity:** The SCMS system provided audio and video functions which promoted the social cues for users to interact and communicate with other participants in terms of contexts similar to those found in real life.
3. **Promotion of interaction and communication:** The SCMC system allowed the instructor to adopt a variety of pedagogical strategies for helping learners to engage in learning activities with rich interaction and communication through the negotiation of meaning and knowledge sharing.
4. **Collaborative learning environment:** Through cooperative learning strategy, learners could collaborate with other peers to solve problems and accomplish specific tasks in the SCMC environment. Learners’ mental development accounted for assistance from other peers or instructor for the collaborative tasks. That is, they sought help from the expert until their mental development achieved
the potential zone, thereby eliminating the zone of proximal development.

5. Self-regulation: Based on the SCMC environment, learners were able to manage and control their learning by themselves. They were at the center of their own learning and took responsibility for learning individually. They actively participated in learning tasks, accomplished assignments, shared their knowledge, gained and received feedback, and searched for help or other resources to solve problems leading to their self-efficacy.

6. Convenience and flexibility: The SCMC environment provided a solution of learning under the constraints of time and geography. Learners could select a course depending on their time and location which allowed for greater flexibility and convenience than a course conducted in a traditional face-to-face environment.

7. Reinforcement of confidence: Due to the privacy and anonymity in a web-based learning context, learners felt more comfortable communicating and sharing their opinions with other participants. Gradually, they felt more confident speaking out and increasing their outputs while communicating with a native speaker of English.

8. Language learning based on cultural diversity: The web-based SCMC learning environment connected learners with others from different cultures across the world. They could not only communicate with one another in English, but also tended to understand the use of terms or expressions in varied cultures. For example, in the present study, learners shared their knowledge of the different
meanings in both western and eastern society of the non-verbal gesture of crossing one’s hands in front of his/her chest when communicating with another person in a business context.

As for the weak points, they are as follows:

1. The unstable Internet connection not only caused mal-functions in the SCMC system, but also reduced learners’ motivation in learning as well as the effectiveness of learning. Moreover, the breaking sounds and delayed images due to the poor connection greatly reduced social cues which could have enhanced the communication between interlocutors.

2. The video function only offered limited image size which could only highlight the facial expressions of participants. Besides, all participants needed to be in front of their video-camera which severely limited body language.

3. All learners needed to use a headset during discussion; otherwise, the noises created on one side would affect the sound quality for the entire class.

4. The quality of connection affected the authenticity found in a traditional face-to-face environment and might have decreased the interaction in the SCMC environment.

5. It was hard to gain technical support from someone who was geographically distant, so it was also difficult for the assistant to clearly understand and fix the problems immediately.

6. Since the SCMC system was not designed for the purpose of education, some functions could not support instruction and learning (e.g., Skype).
7. Learning in the SCMC environment was demanding. Learners were required to integrate different kinds of technologies to accomplish varied tasks or prepare the necessary infrastructure, including both hardware and software for the instruction. Sometimes, it excluded the learner who feared to adopt the new technology for learning.

The strengths and weaknesses were specifically deducted from the learners’ interview and the responses to the open questions in the course evaluation. The learners’ findings were similar to the instructors’ findings which focused on technology and pedagogy.

Conclusion

In summary, the study adopted Vygotsky’s sociocultural theory and communicative teaching approach as substantial theoretical frameworks to develop an instructional program for those foreign learners who voluntarily attended to improve their spoken English skills in a web-based SCMC environment. The findings from the instructors’ and learners’ understanding of their experiences in a spoken English instructional program showed that all participants preferred to teach and learn, respectively, in a traditional face-to-face environment. However, they recognized and agreed that the use of an SCMC could be effective when time, geography, and cost prohibited them from teaching/attending in a face-to-face environment. The convenience and flexibility of the SCMC system optimized distance learning for individuals.

The curriculum and learning activities designed based on the theoretical frameworks provided learners with more opportunities to interact and communicate with
one another through social presence within the web-based SCMC system. The instructors were able to different pedagogical strategies to construct a learner-centered and collaborative learning environment for learners to help mediate references and information from other interlocutors through the negotiation of meaning during interaction and communication. The learners were able to manage and control their learning and actively participate in learning tasks with self-efficacy and autonomy. The scaffolded knowledge gained from peers’ help also allowed them to share their knowledge in the process of cooperative tasks while learning to solve problems. Through the SCMC system, they built up confidence and increased the outputs during the process of learning. They also applied the terms, forms, and inputs in class to different real-life contexts based on the communicative teaching approach.

Overall, they all agreed they would like to either deliver instruction or take the instructional program again in the future because of its valuable strengths, despite its recognizable weaknesses.
CHAPTER 5: DISCUSSION AND CONCLUSION

Introduction

This chapter begins with the summary of the conclusions from the study and examines the findings with regard to the existing research literature. In addition, the chapter evaluates the study as a whole, outlining both strengths and limitations. The last section discusses the implications from the findings and suggests areas for future research.

This study employed a qualitative case study guided by two theoretical frameworks, Vygotsky’s sociocultural theory and communicative language teaching approach, to investigate and answer the following research questions:

1. How do the instructors understand their experiences of delivering spoken English instruction in a real-time, online context, and what meaning do they give their experiences? What are their experiences with the learning activities based on the provided curriculum? What are the strengths and weaknesses of the instruction from their point of view? What competencies or skills should a synchronous online spoken English instructor have?

2. How do the learners understand their experiences of taking the spoken English instruction in a real-time, online context, and what meaning do they give their experiences? How do they learn? What are their perceptions of the instruction and curriculum? What are the strengths and weaknesses of the instruction from their point of view?

To investigate how instructors and learners understand their experiences of
delivering and taking the spoken English instructional program in a web-based environment and what meaning they give their experiences, the study employed in-depth, semi-structured interviews, participant observations, and course evaluations. The study also adopted Vygotsky’s sociocultural theory and communicative language teaching approach to interpret and analyze instructors’ and learners’ perception of instruction, as well as curriculum and learning activities within the instructional program. The interpretation and analysis focused on the following aspects: negotiation of meaning, interaction and communication, zone of proximal development, collaboration and scaffolding, and self-regulation. In addition, the study examines instructors’ competencies, and the strengths and weaknesses of using an SCMC system for a spoken English instructional program.

Teaching and Learning in an SCMC and SLA/FL Environment

Interaction and Social Presence Affecting Communicators’ Perspective on Teaching and Learning between an SCMC and a Traditional Classroom Environment

Findings in the present study revealed that the instructor and the learners had similar views on teaching and learning in an SCMC environment versus a traditional classroom environment. Three of the four instructors preferred teaching, and all learners in this study preferred learning in a traditional classroom environment. One instructor would like to have the option of either of the two environments, depending on the subject. Most participants preferred a traditional face-to-face environment because of the level of interaction and social presence (Appendix L).
Attribution of Interaction

Interaction has been regarded as an important factor in both web-based teaching and learning in related literature (Fulford & Zhang, 1993; Kearsley, 1995; Picciano, 2002). Picciano (2002) pointed out that “[B]oth students and faculty typically report increased satisfaction in online courses depending on the quality and quantity of interaction” (p. 22). A study of Shea, Fredericksen, Pickett, Pelz, and Swan (2001) on the associations among satisfaction, performance, and interaction concluded that the more interaction between the instructor and the students and between the student and the students, the more satisfaction the student has in an online class. Picciano also found that presence is crucial in an online course because it is “fundamentally a social phenomenon and manifests itself through interactions among students and instructors” (p. 24). That is, social presence correlates with interaction. In this present study, because of problems with the Internet connection, some instructors and learners reported image delays and voice breaks during the class session. Learner 1 stated that the most important problem needed to be overcome was the technical problems involving Internet connection. He recognized that the problem “wasted class time and interfered with the lessons.” He provided an example that had occurred in his class:

At the beginning of the classes, we spent about half of the class time solving the problems of the voices or software. I thought solving technical problems wasted our learning time as well as had a negative impact on our learning enthusiasm. There were unpredictable technical problems on laptops and software happening...
in the process of learning which interrupted the class and decreased my energy and motivation for learning.

Learner 4 pointed out the same problem. In addition to the connection problem, she reported another technical problem -- poor sound quality (e.g., noises), “the next second we heard noises.” Once the connection was poor on one learner’s side, the noise “could probably influence the quality of connection [in class].

Most participants in this study have been teaching and learning in a traditional face-to-face classroom for a long period of time. They have been accustomed to the mode of interactions which occur frequently and easily in such an environment. However, in an SCMC context, they had to present themselves in front of a web-camera and connect to the audio setting for transmission of sounds to ensure the quality and quantity of interaction. These types of problems would not happen in the traditional face-to-face classroom. Vrasidas and McIsaac (1999) investigated the factors influencing interaction in an online CMC course and found that students’ prior experience of study was one of the three factors affecting their participation in online synchronous chats. The novice students could not keep up using online synchronous chat for the learning activities and easily felt uncomfortable and nervous in class, while the students with a couple years of CMC experiences preferred to participate in both synchronous and asynchronous chat. All learners in this study had no prior experience using an SCMC system for learning, so they might need time and increased technological skills and knowledge to improve their self-efficacy in the SCMC environment.
Instructional Strategy to Promote Interaction in SCMC Context

The research literature with regard to interaction as the robust variables affecting an effective online learning is prolific and extensive. There have been a number of studies on how to promote interaction (Berge & Muilenburg, 2005; McNeil, Robin, & Miller, 2000; Picciano, 2002; Swain, 2002; Tu, 2002). According to the instructors’ and the learners’ understanding of their teaching and learning experiences in this study, their concerns supported these studies which focused on interaction. Therefore, the instructors adopted different approaches to facilitate learning with rich interaction.

Formulation of Instruction

In Gilbert and Moore’s (1998) study regarding how to build interactivity into a web course, they grouped types of interaction into two categories: social interaction and instructional interaction. Social interaction refers to the interactions communicated by body language, voice, and facial expressions. Instructional interaction emphasizes the interactions and the implied importance of a teacher’s control of content delivery and a learner’s control of the instructional processes. McNeil, Robin, and Miller (2000) implied that in an online course, an instructor should enhance instructional interactions which are “evident in the many corrections and adjustments that an instructor makes during the progress of a class” (p. 701). An instructor should use adaptive behaviors (e.g., pacing of instruction, feedback) to help learners achieve their learning goals.

In the present study, instructors corrected and adjusted their teaching approach to increase the quality and quantity of interactions among learners. For example, Instructor D took learners’ suggestions and instructors’ advice to provide more interactions between
learners and learners instead of primarily lecturing. Another strategy Instructor D adapted to motivate learners’ outputs and increase the interaction among learners in discussions was that he usually gave learners opinion-based questions which allowed them to either agree or disagree with others’ views. Instructor A used Whiteboard contained in the SCMC system to add text confirming ideas communicated during learners’ discussion to accommodate visual learners. Text not only helped them have a better understanding of all participants’ opinions, but also augmented the interaction among them.

In order to involve, engage, motivate, and mentor learners to foster an interactive, communicative, and collaborative learning environment, all instructors previewed the contents of each class based on the provided curriculum and learning activities in this study. They read teaching materials, watched videos, considered what media to use, and sent/posted schedule to/for learners. To prepare for instruction, they wrote down the important terms, notes, and questions for discussion in class. They planned learning activities, such as scenarios, to involve learners in communication and interaction with their peers. Additionally, Instructor B considered the diversity of Asian learners’ characteristics of learning, so he encouraged learners to communicate with one another without thinking of potential errors they may make. He tried to foster a positive and learner-centered learning environment. This strategy extended the characteristics of communicative language teaching approach to identify that “[diversity] is recognized and accepted as part of language learners and users as it is with first language users” (Bern, 1990, p. 104).
The examples above showed how the instructors adapted different methods to enhance instructional interaction to promote the interaction between learner and learner. As for the learners, most of them previewed lessons before class to be ready to engage in the class and participate in the learning activities. They understood that if they wanted to make improvement in their oral skills, they would need to prepare themselves well for discussions, responses, and feedback within learning activities. Although they recognized that the course design and learning activities (e.g., role-playing) promoted interaction and communication in class, their participation in learning activities could ensure that the class would be more interactive and communicative. In addition, learners understood that their instructor’s teaching strategies allowed them to share their views with other learners without constraints during the class, which could provide more opportunities for them to interact and communicate with other learners. The learners’ experiences in the instructional interaction showed the control of the instructional process relating to the response of the instructional content (Gilber & Moore, 1998).

**Social Interaction**

The interaction through body language, both verbal/nonverbal, between the instructor and the learner in this study was limited because of the poor Internet connection, the limited size of images, and the ignoring of visual cues. These factors relating to telepresence (the degree of presence that a medium can mediate) did affect learners and instructor’s attitude toward the interaction within the SCMC spoken English instructional program. The lack of presence was recognized by both the instructor and the learners in class, especially those learners whose equipment and connection did not
meet the technology requirements of the instructional program. Besides, other learners were affected by those learners as well. Moreover, when the social interaction did not meet the learners’ expectations, learners naturally ignored the images. Under such circumstances, social interaction decreased and negatively impacted the learners’ learning affective and outcomes.

In the present study, most instructors frequently used verbal affirmation (e.g., *good, well, great*) to encourage learners and support learners’ opinions. However, when the quality of sound was poor or frequently interrupted, instructors adapted alternative strategies to improve the presence that could be observed. For example, all instructors used Whiteboard and Chat to enhance interaction and social presence in class. They wrote down the key terms and concepts to help all participants’ comprehension of discourses. They also used emoticons to show their feelings and attitude toward others’ opinions, such as *yeah* to express agreement. Other emoticons like “:-)” (smiling), “:-p” (NYA nya nya NYA nya nya) could be seen in the discussions and learning activities. Those emoticons used for facial expressions were deemed an alternative and compensatory strategy for both learners and instructors in this SCMC spoken English instructional program. Fahy (2003) pointed out that emoticon was one of the indicators to show peer-to-peer interaction and support in the computer-mediated communication environment. This type of online support was often generated and used by CMC users to recognize and support other individuals as co-participants in the online community. Burge (2000) argued that this type of support could be a channel to decrease online communication failures and miscommunication.
In addition to emoticons, moreover, all participants used sounds (repetitive pronunciation) to express their affections and opinions. For example, some learners used the filler (e.g., uhnn) to express that they were thinking over what they wanted to state next. Some learners used the same filler when they were not sure that they pronounced or used a word correctly. The instructors also used the filler (uhnn) to agree or affirm learners’ opinions to encourage them to create more outputs. From their experiences, this type of non-verbal could be used when verbal (e.g. good) or body language (nodding) were not available through video media. Namely, when images were delayed, the instructor could enhance verbal or nonverbal expressions to promote interaction. Accordingly, when verbal expressions were limited or when they disappeared, an instructor may use non-verbals to increase interaction in class.

Summary

Both instructors and learners recognized that the instructional program was effective and the use of the SCMC system for spoken English teaching and learning had potential in the future. They did prefer, however, teaching and learning in a traditional face-to-face environment if the time, geography, and expenses were available. The instructors also stated that they wanted to create an SCMC language learning environment through duplicating a face-to-face classroom environment. Their concerns, in fact, directly related to the insufficiency of interaction in this instructional program. However, instructional strategies could promote the insufficiency of interaction and social cues resulting from technical problems. An instructor could enhance instructional interaction including the control of content delivery and learners’ control of instructional
process to increase learner-to-learner interaction in class. They could also strengthen social interaction through flexibly using texts, non-verbals, and emoticons combined with video and audio functions in class.

Instructors’ and Learners’ Role in an SCMC Spoken English Instructional Program

Role of Instructor

Goodyear, Salmon, Spector, Steeples and Tickner (2001) outlined the major roles of a competent online teacher as a content facilitator, technologist, designer, process facilitator, adviser/counselor, assessor, and researcher. They also listed six main task areas for the process facilitator role: welcoming learners, establishing ground rules, creating community, managing communication, modeling social behavior, and establishing own identity. They deemed a competent online teacher to be a facilitator who established an environment where learners could gain help and support, and be involved in their learning. In this study, all instructors understood and perceived their role to be a facilitator who mentored, guided, and supported learners in achieving their learning in the instructional program. They did want to monopolize control of the class, but instead involved learners in the management and organization of their own learning.

In addition, they used the course management system to upload teaching materials, created learning activities, assigned tasks, and established informational resources for learners to flexibly control their own learning depending on their own schedule and pace. That is, all instructors encouraged learners to take responsibility for their own learning rather than provide information to learners. That is, learners were expected to positively increase their outputs on their own and under the instructors’ help and guidance. The
instructors’ delivery of instruction was geared toward interaction and communication with other learners instead of inquiries and responses between the instructor and the learner. Learners assisted other peers when they had difficulty understanding terms or comprehending others’ expressions. Moreover, the instructors adapted varied instructional strategies (e.g., inquiry cues) to promote learner-to-learner interaction, so learners could assist one another in solving problems on their own in or after class. Naturally, they built their own learning community. Swain (2002) argued and supported that interaction derived from learning community was important for online teaching and learning.

**Role of Learner**

All learners voluntarily participating in the instructional program were from Asia where the traditional face-to-face learning method has been implemented for a long period of time. They all reported that they had studied under a very conventional instructional style, passively participated in learning activities, and had grown accustomed to receiving knowledge from their teachers in class. They had no prior experience attending a real-time, online class and learning in an interactive and communicative environment with a native English instructor. Therefore, sixteen learners originally enrolled in the instructional program, but only seven learners attended the class regularly, and six of the seven learners attended every class of the seven-week instructional program. Most of the learners who dropped the class stated that they fell behind in the class because they did not actively participate in discussions or other learning activities in class. Each class they kept silent even though the instructor provided
opportunities or encouraged them to speak out. They reported that they were too busy to prepare for the class well, or they felt too stressed because they were required to share their experiences or knowledge with other peers in class.

Compared to those learners who dropped the class, the seven learners who remained, actively participated in class. They voluntarily enrolled in the class because they thought they could improve their competence as long as they seized every opportunity to speak out, regardless of correctness or errors in their discourse. From their interviews, they all agreed that they should preview the contents, read articles, watch video clips, and generate ideas for discussions before each class. They actively engaged in learning activities and contributed as much as they learned. They helped other learners when they made errors on pronunciations or spelling. They cooperatively accomplished tasks together. After class, they tried to organize their schedule to complete assignments posted on the Moodle system. They controlled and directed their own learning and understood that learning was their responsibility (Bolhuis, 1996; Garrison, 1997).

Since very few courses are available for learners in their location, they appreciated the opportunity to take this online class. Learner 5 stated in the interview that she liked to share her opinions regardless if she was correct or incorrect. In her process of learning, she understood that “as long as [she] was willing to talk, [her] instructor and classmates would try to understand [her] without laughing at the mistakes [she] made. Learner 5’s understanding encouraged her to actively participate in the class and build up her own confidence in providing for and contributing to the learning activities.
All in all, the learners in this study perceived themselves as a provider, sharer, and active participant in this SCMC spoken English instructional program. They took responsibility for their learning, organized and managed their learning content, and monitored their own pace of learning. They were no longer passive recipients of information and knowledge in class.

**Summary**

The role of the instructors and the learners were interrelated in this study because they were reciprocal in the teaching and learning environment they established together. The instructors perceived their role as facilitator who could empower learners by encouraging them to become actively involved in their learning and to assume personal responsibility for their learning. The instructors created an environment with collaborative tasks for learners to build their own learning community for sharing and supporting one another in the process of learning. Additionally, learners were participants who would like to attend a course with the instructors’ endeavors in establishing a learner-centered and self-directed learning environment for them. Accordingly, they would not participate in an online course simply “transfer[s] information to the online environment without the support of interaction and activities that facilitate learning (Klopfenstein, 2003, p. 41).
Curriculum and Learning Activity Design Based on Vygotsky’s Sociocultural Theory and Communicative Language Teaching Approach

Features of Curriculum and Learning Activity Design

SCMC system is a real-time, online communicative system allowing direct person-to-person communication in CALL. The SCMC curriculum design for a spoken English instructional program is supposed to be able to expand the features of the system to provide instructors and learners a more flexible and authentic environment. Levy and Stockwell (2006) suggested CALL curriculum designers to adapt appropriation of theories and methodologies researched by previously related studies on SLA and FL skills in CALL. In this study, the curriculum and learning activity design were created on the basis of sociocultural theory and communicative language teaching approach, and supposed to augment and optimize SCMC features to effectively support oral skill learning and teaching.

As for the curriculum design, the curriculum contained theme/unit, academic/technological standard, benchmark, performance indicators, teacher resources, instruction and assessment, and media in the study. Instructors clarified the standards, performance indicators, instructional contents, and method of assessment, and media in class. They also uploaded the curriculum on the course management system for learners to access and prepare for the class. This approach did expand the feature of flexibility in online learning. Savignon (1983) suggested that a curriculum for second language learning curriculum based on communicative language teaching approach (CLT) should
focus on the systematic practice in the application of rules, emphasize authentic use of language, use language to express attitude toward the events happen in the real world, allow learners to interact with other people in society and immerse themselves in other cultures. The curriculum in this study selected business English as the main theme and topic, and the instructional contents provides authentic materials for learners to understand the usage of terms and patterns in their daily life in the target language society and culture. For example, learners were required to watch the movie clips to observe how different businesses presented and upgraded the professionalism for services based on the important terms and concepts. Through the authentic materials, they comprehended how those terms and rules were using in the society at that time.

As for the concept of interactions with other people in community, culture, and society, the concept is the same as what socioculture theory emphasizes on. Each individual mediates information through interaction with other individuals in the society and cultures. Based on the concept, the instructional contents and materials within the curriculum in the study were selected from the events happened around people authentically. For example, the material about what makes Wal-Mart special was read by learners before the class. Some points were observed including general-merchandise stores vs. discount stores, reputation, retailing strategy, and neighborhood markets. Although learners did not have opportunity to purchase goods in Wal-mart, they could follow the points to compare what they had in their society to learn the terms and concepts and apply the usage of language once they have a chance to interact with the individuals from the English speaking society.
As for the learning activity design, some learning activities have been regarded appropriately and applied to language learning. Littlewood (1981), Paulston and Bruder (1976) suggested four types of communicative activities: social formulas and dialogue activity, community-oriented tasks, problem-solving activities, and role plays. Besides, leading and group discussion and scenario activity which were also deemed effective one for language learning were also involved in the curriculum in this study.

Take scenario activity implemented in the instructional program for an example. 

Example: Scenario activity

Topic: Formal and informal expressions

Scenario: Call your classmate and faculty

An undergraduate student is working on his/her final project. However, he/she has some questions which cannot figure out, and the deadline is right on the corner. He/She decides to call his/her classmate, Jack, for help. Unfortunately, Jack is out of town and will be back till late night. In order not to hand in his/her final project overdue, he/she makes up his/her mind to call his/her faculty (see practice sheet).

Practice Sheet

The student calls Jack.

1. The student calls Jack, but Jack’s brother says that Jack is out of town…..

2. Jack’s brother likes the students to leave message or call jack again in the evening.

The student calls his/her faculty.

1. The student decides to call his/her faculty about the final project.
2. The student likes to know

(1) how many pages are required for the project report including references

(2) what type of writing format (APA, MLA, etc.)

(3) what is the date to present the final project

(4) what kind of file format is saved and send to the faculty

(5) else

This purpose of the scenario activity was to allow learners to understand how to appropriately establish and maintain social relationships by using formal and informal expressions properly in real context (social formulas). Learners also did brainstorming to figure out the way and proper expressions they learn to solve the problems which might happen in their daily life in this scenario (problem-solving). Learners were required to play different roles to practice communication in simulated, real-life scenario (role-playing). Sullivan (2000) pointed out that role of play derived from Vygotsky’s sociocultural theory is a kind of activity to transit learners’ zone of proximal development because learners can interact with other peers to negotiate meanings and construct knowledge together. That is, learners scaffolded and share information from and with other peers though participate these types of learning activity. They cooperated with peers to solve problems which would encounter in the real world and know how to interact and communicate with other people through appropriate application of terms and rules learned in classroom to different society and culture.

As a result, learners will have confidence in communication with other people, which keep motivating their self-regulated learning. In summary, the features of curriculum and
learning activity presented and were in accorded with the important components of the two substantial theories, sociocultural theory and communicative language teaching approach in this study. The two theories could be optimal theoretical frameworks for SCMC spoken English curriculum and learning activity design.

*Facilitating Spoken English Learning in an SCMC Environment*

Pedagogy in an SCMC environment varies from that in a traditional face-to-face classroom or an ASCMC context. Effective online facilitation should be able to involve, motivate, and empower learners to communicate and interact with all participants culturally and socially (Collison et al., 2000; Salmom 2006b). In order to achieve this, all instructors were required to deliver instruction undergoing nonlinear stages (preparatory, testing, implementation, evaluation) based on the model of instructional design. However, instructors played the major role in the execution of the instructional program. Their competence to effectively facilitate learning is relatively important and significant.

*Instructors’ Competencies*

Instructors’ competencies keep shifting because of innovative or alternative ways of integrating technology and learning purposes. In this study, instructors recognized that computer skills were, no doubt, one of the major competencies that an instructor should have for the instructional program. However, they also pointed out other critical competencies, especially for those instructors who facilitate spoken English learning in an SCMC environment. Those competencies include: (1) organization and flexibility of instruction; (2) management of instruction; (3) communication skills; (4) pedagogical strategies; and (5) skills to guide learners to become more involved and interactive.
From the learners’ point of view, the necessary competencies for an online instructor include: (1) directing the level of course content; (2) designing a good curriculum; (3) teaching with patience to a diverse level of learners; (4) supporting and encouraging learners’ learning; (4) managing and engaging instruction and learning activities; (5) acknowledging diversity of learners (e.g., race, culture); (6) preparing well for instruction (e.g., teaching materials, relevant information); (7) having at least a college education; and (8) having a good command of the English language.

In general, these competencies could simply be divided into three categories -- pedagogy, technology, and psychology -- which support the suggestions from previous related research literature with broad views on online learning (Goodyear et al., 2000; Razak & Embi, 2004; Schoenfeld-Tacher & Persichitte, 2000; Spector & de la Teja, 2001; Thach & Murphy, 1995).

Strengths and Weaknesses

The instructors’ cited strengths of the SCMC system for spoken English instruction in this study that either supports previous studies or was specifically derived from the instructors’ understanding:

1. Combining the text, audio, and video functions contained in the SCMC system used by the instructors could not only promote interaction and communication, but also assist learners’ comprehension with the discourse and decrease misunderstanding (Burge, 2000; Fahy, 2003). The Whiteboard and Weblink functions also made resources readily available.
2. Providing participants’ images allowed for non-verbal interaction such as leaning forward or smiling which could promote interaction and social presence. Thweatt and McCroskey (1996) pointed out that non-verbal immediacy (a sense of psychological closeness generated by facial expression, eye contact, posture, and proximity) could diminish perceived distance between communicators.

3. Providing a fair level of interactivity for instruction allowed users to communicate with others without the constraints of geography and time.

4. Allowing instructors to replicate a learning context which was similar to a traditional classroom environment providing engagement, social presence, and interactivity.

The overall learners’ perception of using the SCMC system for spoken English instruction was positive, and they also identified strengths that were in accordance with related research.

1. Compatibility: The SCMC system was compatible with other technologies in the instruction, for example, the course management system (e.g., Moodle) and the application programs (e.g., Audacity, Flash Player).

2. Authenticity: The SCMC system provided audio and video functions which promoted social cues for users to interact and communicate with other participants in terms of contexts similar to those found in real life.

3. Promotion of interaction and communication: The SCMC system allowed the instructor to adopt a variety of pedagogical strategies for helping learners to engage in learning activities with rich interaction and communication through the
negotiation of meaning and knowledge sharing (Aragon, 2003; Beldarrain, 2006; Swain, 2002).

4. Collaborative learning environment: Through cooperative learning strategy, learners could collaborate with other peers to solve problems and accomplish specific tasks in the SCMC environment (Darhower, 2002; Warschauer, 1997). Learners’ mental development accounted for assistance from other peers or instructor for the collaborative tasks. That is, they sought help from the expert until their mental development achieved the potential zone, thereby eliminating the zone of proximal development.

5. Self-regulation: Based on the SCMC environment, learners were able to manage and control their learning by themselves. They were at the center of their learning and took responsibility for learning individually. They actively participated in learning tasks, accomplished assignments, shared their knowledge, gained and received feedback, and searched for help or other resources to solve problems leading to their self-efficacy (Barnard, Paton, & Lan, 2008; Fisher & Baird, 2005).

6. Convenience and flexibility: The SCMC environment provided a solution of learning under the constraints of time and geography. Learners could select a course depending on their time and location which allowed for greater flexibility and convenience than a course conducted in a traditional face-to-face environment.
7. Reinforcement of confidence: Due to the privacy and anonymity in a web-based learning context, learners felt more comfortable communicating and sharing their opinions with other participants. Gradually, they felt more confident speaking out and increasing their outputs while communicating with a native speaker of English.

8. Language learning based on cultural diversity: The web-based SCMC learning environment connected learners with others from different cultures across the world. They could not only communicate with one another in English, but also tended to understand the use of terms or expressions in varied cultures. For example, in the present study, learners shared their knowledge of the different meanings in both western and eastern society of the non-verbal gesture of crossing one’s hands in front of his/her chest when communicating with another person in a business context.

In addition to the strengths, the instructors also identified weaknesses of the SCMC system.

1. The unstable Internet connection caused delayed images and breaking sounds;

2. The limited image size did not allow learners to view the whole body of each participant which decreased social presence;

3. The unstable connection affected both the instruction and learners’ perceptions of the instruction.

Learners also pointed out the weaknesses they recognized from the instructional program:
1. The unstable Internet connection not only caused malfunctions in the SCMC system, but also reduced learners’ motivation for learning as well as the effectiveness of learning. Moreover, the breaking sounds and delayed images due to the poor connection greatly reduced social cues which could have enhanced the communication between interlocutors.

2. The video function only offered limited image size which could only highlight the facial expressions of participants. Besides, all participants needed to be in front of their video-camera which severely limited body language.

3. All learners needed to use a headset during discussion; otherwise, the noises created on one side affected the sound quality for the entire class.

4. The quality of connection affected the authenticity found in a traditional face-to-face environment and might have decreased the interaction in the SCMC environment.

5. It was hard to gain technical support from someone who was geographically distant, so it was also difficult for the assistant to clearly understand and fix the problems immediately.

6. Since the SCMC system was not designed for the purpose of education, some functions could not support instruction and learning (e.g., Skype).

7. Learning in the SCMC environment was demanding. Learners were required to integrate different kinds of technologies to accomplish varied tasks or prepare the necessary infrastructure, including both hardware and software for the instruction.
Sometimes, it excluded the learner who feared adopting the new technology for learning.

In the interviews, both instructors’ and learners’ shared similar perceptions of the strengths and weaknesses of using the SCMC system for the spoken English program. Besides, some specific opinions which were not found in related studies could provide education in teacher preparation and future research.

A Conceptual Framework of Instructors’ Preparations for Facilitation of Spoken English Learning in an SCMC Environment

In order to understand both instructors’ and learners’ experiences with the use of SCMC system for spoken English teaching and learning, the researcher developed a 7-week instructional program and designed the curriculum and learning activities on the basis of two major theoretical frameworks: Vygotsky’s sociocultural theory and communicative language teaching approach. The core concept for designing this instructional program was derived from the previous exploratory studies by the researcher and his co-authors (Lee et al., 2007). They found that besides technology, pedagogy was the other major element in SCMC spoken English teaching and learning. Four interrelated factors (i.e., technological savvy, motivation, interactivity, satisfaction) were the most powerful variables affecting the use of SCMC for spoken English teaching and learning. The fifth variable, effectiveness, was also suggested to be crucial based on related research.

Lee et al. (2007) extended the exploratory study employing a qualitative approach to conduct a pilot study on understanding the perceptions of both the instructor and the
learner in the SCMC spoken English program. They suggested a conceptual framework to innovatively use an SCMC system for spoken English instruction. Lee et al. confirmed the stages of executing the instruction based on an instructional design system. They argued that effectively using SCMC for this kind of context needed consistent technology support for both learners and instructor from the beginning of the instructional program to the end. Furthermore, an appropriate and workable course management system could help control instructional content for instructors and encourage learners’ self-learning.

The necessity of specified competencies for an online instructor and a well-designed curriculum could also ensure the effectiveness of the instructional program. This conceptual framework provides an approach for educators to facilitate learning and for further study as well.

Building upon the previous two studies, the researcher expanded and improved previous conceptual framework. In this conceptual framework (Figure 2), instruction and SCMC technology are the two central elements for an SCMC spoken English instruction which supports the previous exploratory study. There were six considerable components to support the effectiveness of the instructional program: IDS (instructional design system), technology support, course management system, qualified instructor, well-designed curriculum, and theoretical frameworks (socioculture theory, communicative language teaching approach). The two substantial theories served as the theoretical framework when designing the curriculum and learning activities for the instruction. The aspects of the two theoretical frameworks—negotiation of meaning, zone of proximal development, collaboration and scaffolding, self-regulation, language as a functional
system, and communicative competence were used to interpret and analyze instructors’ and learners’ experiences of instruction, curriculum and learning activities, and the phenomena that occurred within the instructional program.

![Figure 2. A conceptual framework for design and facilitation of a real-time, online spoken English learning in SCMC context (created by author)](image)

Based on the two theories, only when an individual interacts and communicates with other individuals in social and cultural contexts, could that individual mediate information and gain help from them to construct his/her knowledge. Language is a functional system to be used for individuals to mediate information. Therefore,
interaction is considered the most important factor affecting teaching and learning as supported by both instructors and learners in the present study.

In this study, interaction was negatively affected due primarily to Internet connection and, in some cases, insufficient bandwidth. To promote interaction, the instructors adapted varied strategies to establish a learner-centered environment to encourage learners to be responsible for their own leaning. The instructor empowered learners to control the content of the instructional process, manage learning, and cooperate with other learners to accomplish learning tasks (i.e., instructional interaction). The instructors used different strategies to enhance social interaction. For example, they used texts with audio and video functions to help learners’ understand important concepts. They used verbal (e.g., good) or non-verbal expression (e.g., facial expressions) to increase interaction between learners and learners when the images or sounds were unavailable due to poor Internet connection.

When communicators interact with one another, social interaction takes place naturally and simultaneously. When the instructors promoted the interaction in the process of learning, learners could negotiate and convey meaning with fewer interruptions or miscomprehension. Learners could concentrate more on the class and focus on learning activities. Through interactions, the lower-proficient learners gained help from the other more knowledgeable learners in the process of learning. For example, learners corrected other learners’ errors such as misspelled words and mispronunciations. They shared their experiences or concrete examples regarding the diversity of cultures to help other learners have a better understanding of specific concepts. When the novice
learners could appropriately and correctly use words or forms, the zone of proximal development disappeared. They no longer needed help with the same problem.

In the instructional program, the instructors not only provided cooperative learning opportunities for learners to accomplish learning tasks, but also encouraged learners’ sharing and assistance through discussions. Take Instructor D’s class for example. Instructor D grouped learners together and required them to share their opinions about the idea of adding more detailed nutritional information on food products for consumers. He provided a context for learner-to-learner interaction, and learners learned as a group and scaffolded resources and information from more experienced and knowledgeable learners. In this learner-centered environment, learners were encouraged to take responsibility for their own learning. In this study, learners previewed content, actively participated in learning activities, contributed and shared their knowledge, controlled their own learning pace, and completed assignments. They tried to solve technical problems and were confident in making improvements if they were willing to speak out. That is, they regulated their own learning in the real-time, online environment.

In the learners’ interview, they reported that the achievements they made were not obvious to them as the program was only seven weeks long; however, they stated that the use of an SCMC system for spoken English learning was effective and had potential for the future. In the SCMC environment, they were able to have opportunities for interaction with other participants and gain feedback from them. They were satisfied with the learning process and the opportunity for participation in learning activities, which
supported Lu’s study (2007) on interaction and social presence in technology-mediated learning.

The conceptual framework was improved based on the instructors’ and learners’ experiences and the researchers’ understanding of the use of an SCMC system for spoken English teaching and learning in this present. Vygotsky’s sociocultural theory and communicative language teaching approach were the foundation to design the study, and to interpret and analyze the participants’ experiences and specific phenomena that occurred in class.

Conclusion

The SCMC system has been used for second and foreign language teaching and learning within CALL and has great potential to promote interaction and communication; however, it has not been widely adapted by English educators. Many constraints and weaknesses, especially in application of learning and pedagogical approaches, had been found in related studies. Additionally, little research has provided in-depth details on how to improve the SCMC environment on the basis of crucial theories and instructional strategies. In addition, Vygotsky’s soicocultural theory and communicative language teaching approach has been applied to the use of ACMC and SCMC within CALL for interaction, and curriculum and learning activity design. Again, few studies have investigated whether the two theories are suitable for learning spoken English in an SCMC environment. What are the advantages, weaknesses, and limitations?

More specific questions were investigated through qualitative research methods to understand both instructors’ and learners’ experiences of using an SCMC system for
spoken English instruction and learning. All voluntary participants took a real-time, online instructional program with curriculum and learning activities developed using Vygotsky’s sociocultural theory and communicative language teaching approach. The two substantial theories were used to interpret and analyze specific aspects of interaction in social dimensions: mediation, negotiation of meaning, zone of proximal development, collaboration and scaffolding, and self-regulation.

The outcomes from the study have both theoretical and practical significance. The findings support the most significant reasons the SCMC has not been widely used for spoken English learning. All participants favor a traditional face-to-face classroom environment for teaching and learning because of interaction. The factors affecting interaction was Internet connection, bandwidth speed, and computer equipment. These problems negatively impacted learners’ learning motivation, enthusiasm, and satisfaction as well. The One will affect all effect could very well be the pitfall of the instructional program when such problems occurred. To overcome this problem, the instructor should adapt different pedagogical strategies to strengthen interaction depending on the degree of presence the SCMC systems could mediate. Besides, technical support is needed to provide prompt assistance for both learners and instructor both in and after class. A learning policy is also required for all learners to make sure that they are able to set up the equipment correctly, meet the technology requirements, and select a suitable location to log into class without interruptions.

In the study, all instructors thought that they were a facilitator who mentored, supported, and encouraged learners to be self-regulated. They established a learner-
centered context that encouraged learners to engage in learning activities, accomplish learning tasks, and achieve learning goals. Learners regarded themselves as an active participant, took responsibility for their own learning, and were willing to actively participate in the class. They previewed the class, shared what they learned, helped other learners solve problems, and offered feedback to other learners. Both learners and instructors in the study identified the necessary competencies of an instructor to facilitate learning in an SCMC environment. Those competencies could be divided into three categories: pedagogy, technological-savvy, and psychology. Instructors need to know what and how to adapt different learning theories and instructional strategies to enhance and adjust instruction. Identifying diversity of both learners and culture is necessary for instructors to encourage and motivate learners with varied backgrounds as well. They should also have good general computer literacy and skills, but they do not necessarily have to be familiar with each technology. Basically, they need to know how to use the technology which will be used in class and how to integrate the technology with the curriculum.

In this study, the learners’ learning behaviors and attitudes reflected the major components of Vygotsky’ sociocultural theory including mediation, negotiation of meaning, zone of proximal development, collaboration, scaffolding, and self-regulation. Besides, all participants teaching and learning in the instructional program took language as a functional system as well as mediation to convey meanings to one another in accordance with the central concept of the communicative language teaching approach. That is, the instructors’ instruction emphasized both form and meaning to guide learners
to cope with language used in daily life. Learners could not only comprehend the concept of forms and terms, but also accurately and appropriately use them in classroom activities and out of class as well. Therefore, the curriculum and learning activities developed on the basis of social dimension and communicative approach promote learning and teaching in an SCMC environment. Accordingly, the study supported and suggested the two theoretical frameworks could work well for and apply to a real-time, online spoken English teaching and learning.

The study also determined the strengths and weaknesses of using an SCMC system for teaching and learning spoken English. The major strengths included promotion of interaction and social presence, availability of different social interaction; ability to communicate with others without the constraints of geography and time, compatibility of the system with other technologies, environment of collaborative learning and self-regulation, convenience and flexibility of learning environment, and reinforcement of learners’ confidence. The weaknesses included unstable Internet connection, limited interaction and social presence, delayed images and breaking sounds or noises, insufficient authenticity, insufficient and/or prompt technology support, and insufficient design for the purpose of education. The weaknesses, in particular, could provide educators, researchers, and system designers with a better understanding of how to improve and upgrade the pedagogy, learning, research, and SCMC system in the future.

Based on the experiences of instructors, learners, and the researcher, a conceptual framework, in which the important theories, approaches, components, and procedures embedded, was formed and suggested for further study and related instructional
programs. All in all, both instructors and learners recognized and agreed that using an SCMC system for spoken English teaching and learning was effective. SCMC has its potential within CALL, and more efforts for theoretical and practical research are urgent and needed.

Recommendations for Future Research

The recommendations that follow could be grounds for future research to have an in-depth understanding of using an SCMC system for spoken English teaching and learning.

1. The study only adopted Skype and Adobe Connect as the major SCMC system for the instructional program. Future research could be expanded to other SCMC systems which are designed for the purpose of language teaching and learning, such as Moodle. It would be interesting to investigate how that different system could mediate interaction and social presence. It would also be interesting to learn how the instructors and the learners viewed their experience of using a different SCMC system for spoken English instruction and study its strengths, weaknesses, and limitations.

2. The study adapted Vygotsky’s sociocultural theory and communicative language teaching approach to assume that learners use language as a functional system to mediate information and resources through interaction with other participants in the SCMC environment, both culturally and socially. Through interaction, participants can convey and negotiate meaning, share knowledge, provide help for other participants, control their own learning, and improve their competence in
the learning process. Future research might deepen the two paradigms in acquisition of oral competence or even expand to other skills (e.g., writing, listening, and reading) in an SCMC environment. Moreover, additional research might focus on what other principles could be applied for the theoretical framework to design better instruction, curriculum, and learning activities either in Spoken English or other skills listed above.

3. Since the SCMC system has not been widely adapted for language teaching and learning due to many limitations mentioned earlier in the study, few of the participants’ attitudes toward the use of an SCMC system for spoken language teaching and learning could be quantified. The two theories in the study provide well-developed concepts and tools for both quantitative and qualitative research. In addition to qualitative research, in order to have an in-depth understanding of users’ experiences, future research is needed to involve more participants in a related study to have findings with a sample composed of general users.

4. Using the conceptual framework, the process of how to design a spoken English instructional program in an SCMC environment can be interpreted and analyzed on the foundation of two major theories in this study. The purpose of the research to create this conceptual framework based on all participants’ experiences in this study was to present an overview of ideas and practices that shaped the way work was done in this study. Simply speaking, the conceptual framework explained and clarified the particular method used by the researcher and followed by all participants in the study. Further study might expand it or provide a novel
approach to related research by involving experiences using different participants and principles. Such study could enrich the research on the advent of a new SCMC system in the future.
REFERENCES


Ng, K. C. (2007). Replacing face-to-face tutorials by synchronous online technologies: Challenges and pedagogical implications. *International Review of Research in Open and Distance Learning, 8*(1), 1-15.


## APPENDIX A: Sample Curriculum

<table>
<thead>
<tr>
<th>Subject: Business English</th>
<th>Instructor:</th>
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<tbody>
<tr>
<td>Level: Intermediate</td>
<td>Week: 5, 2\textsuperscript{nd} hour</td>
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### Theme/Unit: Introduction
- 1. Social Situations (Greetings, Body Language)
- 2. Formality / Informality
- 3. Cultural Differences

### Academic Content/Technological Standard
- 1-4-2 Organize and relay information to effectively serve the purpose, context and listener.
- 1-4-3 Pay attention to conventions of oral English communication, including grammar, word choice, register, pace and gesture in order to minimize barriers to listener’s comprehension.
- 2-2 Learners construct meaning from information.

### Benchmark
- 1-S 4.1 Communicate using information on topics from various sources.
- 1-S 4.3 Use grammatical structures (e.g., present perfect tense, simple modals, clauses) to communicate meaning.
- 1-S 4.4 Use words for targeted topics (e.g., health, work, banking, housing, own/child’s education).
- 1-S 4.5 Use strategies to monitor and enhance communication (e.g., ask targeted questions to confirm listener’s comprehension, use word choice).
- 2-2.C Use a variety of technology
- 2-2.D Acquire information

### Performance Indicators
- 2-2.C.1 Use appropriate technology resources for directed listening, viewing, reading, problem-solving, and organizing activities.
- 2-2.C.2 Use a variety of technology resources, including calculators, video educational software and Internet for problem solving, self-directed learning, and extended learning activities.

### Teacher Resources
- Technology support staff, practice sheet

### Instruction and Assessment
- 1. Introduction of formal and informal expressions in English
- 2. Scenarios:
  - Scenario 1: Call your faculty
  - Scenario 2: Phone Interview
- 3. Wrap it up
- 4. When learners are engaging in the scenarios, the rest of learners observe the formal and informal expressions during the activities. The instructor also observe each learner whether correctly use formal and informal expressions or not.

### Media
- Skype, Adobe Connect
Lesson Plan

Lesson Title: Business English Oral Communication
Unit Title: Formal and informal expressions in English
Objectives: After this class students will be able to
1. recognize and identify the relationship between business and society
2. recognize the informal and formal expressions (words, phrases, body languages) in different social contexts
3. appropriately use informal and formal expressions (words, phrases, body languages) in different social contexts

Standards Addressed:
I.  Academic Content
    1-4-2 Organize and relay information to effectively serve the purpose, context and listener.
    1-4-3 Pay attention to conventions of oral English communication, including grammar, word choice, register, pace and gesture in order to minimize barriers to listener’s comprehension.

II. Technological Standard
    2-2 Learners construct meaning from information.

Benchmark:
I.  Academic Content
    1-S 4.1 Communicate using information on topics from various sources.
    1-S 4.3 Use grammatical structures (e.g., present perfect tense, simple modals, clauses) to communicate meaning.
    1-S 4.4 Use words for targeted topics (e.g., health, work, banking, housing, own/child’s education).
1-S 4.5 Use strategies to monitor and enhance communication (e.g., ask targeted questions to confirm listener’s comprehension, use word choice).

II. Technological Standard

2-2.C Use a variety of technology
2-2.D Acquire information

Performance Indicators:

I. Academic Content

II. Technological Standard

2-2.C.1 Use appropriate technology resources for directed listening, viewing, reading, problem-solving, and organizing activities
2-2.C.2 Use a variety of technology resources, including calculators, video educational software and Internet for problem solving, self-directed learning, and extended learning activities

Needed Prerequisite Knowledge or Skill

1. Basic knowledge about different cultures over the world
2. Have basic listening, reading, and speaking skills
3. Computer skill: connect to the Internet, connect headphone to the computer, PowerPoint presentation, uploading images, sound tracks, or movie clips to the learning system

New Terms and Key Ideas: persuasion, customer, products, presentation, demonstration

Procedures for Accommodating Students with Special Needs

NA

Time: 5th Week, 2nd Hour

Lesson Sequence:

1. Introduction of formal and informal expressions in English
   What you found in your daily life about the formal and informal expressions in addition to the body languages.
2. What will you say when you get a phone from someone or someone comes to visit you…….
3. Scenarios: Phone Interview

A computer company has an open position for software engineer. Peter/Mary is one of the applicants for this opportunity and has been notified by the company to have a phone call interview with the manager. Peter/ Mary makes the call on time and the secretary gets the phone…. (see practice sheet)

3. Wrap it up

(1) Quickly review the key points
(2) Preview next class

Assessment Plan

When learners are engaging in the scenarios, the rest of learners observe the formal and informal expressions during the activities. The instructor also observes each learner whether correctly use formal and informal expressions or not.

Materials Needed

Formal and informal expressions in English (work sheet), Scenarios (practice sheet)

Body language

http://changingminds.org/techniques/body/greeting.htm (types of body language for greeting)

http://changingminds.org/techniques/body/parts_body_language/face_body_language.htm (Facial expressions)

http://www.deltabravo.net/custody/body.php (examples of body language)

APPENDIX C: Teaching and Learning Policy

Instructor

- Native speakers should be the citizens whose mother’s tongue is English.
- Applicants’ age should be above 16 years old.
- All applications should be interviewed through face-to-face or online method to make sure the qualification for future facilitations. The qualified candidates will be formally notified personally.
- Preferred qualifications include basic computer skills (Microsoft Office, Internet, E-mail, etc.), high passions, willingness to absorb new technologies and language teaching approaches.
- All instructors should participate in one-week pre-teaching training program which includes technical skills, instructional design, and evaluation.
- After the training course, an instructor should accomplish their teaching material and schedule in two weeks. They should implement one hour online real time pre-teaching before they are permitted to facilitate a regular course.
- Acceptable use always is ethical, reflects good behaviors, and shows etiquette toward other users. Acceptable use demonstrates respect for intellectual property, truth in communication, ownership of data, system security mechanisms, and individuals' right to privacy and freedom of intimidation, harassment, and unwarranted annoyance. Providing any instructor violates the policy, his or her contract will be terminated and take responsibility for the misconducts.
- All online activities should highlight academic discussions, communications or related tasks. Any private task, business, or purpose which is not relevant to courses is prohibited.
- All instructors are supposed to use the cable Internet connection and a desktop computer with sufficient memory space to operate with real-time, online communicative system. They should select an appropriate location to facilitate learning without interruption.
- All instructors are required to teach class on time and attend weekly professional development.
- All instructors have responsibility for responding learners’ questions with regard to learning and help learners accomplish learning activity.
Learners

- People who are interested in learning English as a foreign or second language over the world will be welcomed to register courses.
- Attendance is required and participation is always encouraged for all learners. If learners can not attend a class, a pre-notice e-mail is demanded to their instructors before the class. If learners who fail to attend a class without an excuse or pre-notice e-mail over three times, they will not be allowed to attend the class again and the tuition fees will not be returned. However, they are encouraged to take other classes which are fit to them.
- Before taking a class, learners will be required to take a replacement test to decide which level of class is suitable for them. Learners can take our suggestions to take a class or they can select what they want to take.
- All learners can take advantage of access to open resources to retrieve or share useful data for their learning. Such open access is a privilege, and requires that individual users act in a responsible and acceptable manner. Acceptable use always is ethical, reflects good behaviors, and shows etiquette toward other users. Acceptable use demonstrates respect for intellectual property, truth in communication, ownership of data, system security mechanisms, and individuals' right to privacy and freedom of intimidation, harassment, and unwarranted annoyance. Providing any learner violates the policy, his or her contract will be terminated and take responsibility for the misconducts.
- All learners are encouraged to take each class and fill out an instructional evaluation in the end of each course. Instructors will give learners feedbacks and recommendations in the process of learning to help them achieve their learning objectives.
- All learners are supposed to use the cable Internet connection and a desktop computer with sufficient memory space to operate with real-time, online communicative system. They should select an appropriate location to facilitate learning without interruption.
We are pleased to present the first weekly newsletter which is published by OU eSpoken English Teaching Program. The purpose of the newsletter is to provide communication and to enhance the connection between the learners and stakeholders of this program. We sincerely encourage all learners to keep reading these newsletters; they will contain important messages and policies, which will be really helpful with your learning success in the future. If you have any questions regarding any issues in the newsletter, please do not hesitate to contact us immediately through e-mail. We will be glad to take care of your questions immediately. Again, we really appreciate your participation and wish you a successful learning experience.

**Messages from Instructors**

1. All the instructors are pleased to say that all learners have good command of speaking skills. They have confidence in your successful achievement in the improvement of speaking skills. They have also had a wonderful experience with real time online instruction with learners from different countries and cultures.

2. Please try your best to attend class on time. Joining class late and missing class are both disruptive to the learning experience. If you are late, your instructor will stop the class and add you in the class. It will really affect other learners’ learning. If you are not able to attend the class, please e-mail your instructor before class. However, we strongly recommend you to participate with each class; consequently, you will be able to have a great improvement after seven-week class.

3. We would like to remind those of you who are attending online classes first time about the differences of culture. All instructors are committed to providing excellent instruction to help your learning and treat each class very seriously. Therefore, please abide by the learning policy to make the class going through successfully. For example, please attend the class on time and always keep internet etiquette in mind.

4. We will send the topics of each class and teaching materials through email or post on the Moodle. Please frequently log on Moodle to check announcements or message there. Since we just started the instruction, we need more time to get everything on the track. We will upload teaching materials one week early before the class.

5. Please preview each class and prepare for the class and activity, so you will have
more opportunities to communicate and interact with your instructor and classmate. You are also encouraged to study as a team with your classmate. You can have a group study before or after class through Skype.

6. Please find a location where is quiet and can provide with high speed connection for your learning. When the class is in session, please concentrate on the class, please do not stick around and do other things. (Though the instructor cannot know what you are doing, he/she will give you questions or like you to share frequently)

7. You are encouraged to reach any resources, such as youtube, movies, TV series, about.com to help your learning.

8. As you do the class assignments, write down any questions that you may encounter throughout the articles, videos, or podcasts. Your instructor would be happy to answer any of these questions.

9. Calibrate your Microphone before every meeting/class. This will ensure it is at the optimum sound level. If you are using Skype, be sure to let skype adjust the microphone volume automatically.

Messages from Students

1. In regards to one learner’s suggestion about the use of the web-camera, the following weeks, instructors would like to do that pending on the needs of the class. Instructor will ensure the quality of connection before using webcam for teaching.

2. Your suggestions and positive attitudes toward your learning really give all members of the instruction team great confidence and hope to keep and enhance the quality of instructions and services. We are really appreciated!

Messages from the Course Management Group

1. All the instructors and the members of Course Management Group meet weekly to do our best to enhance our teaching and course management to help your learning.

2. Weekly newsletters will be published on every Sunday evening (Chinese time). Please check your e-mail for the updates routinely.

3. Most problems occurring in the first week class were technical problems which, unfortunately, sometimes delayed the formal class. Therefore, we have decided to enhance our services to help all learners to be ready for each class without difficulty in technology such as disconnection.

   a. Both instructors and the Course Management Group (Isaac and LiWei) will do their best to stand by 10 minutes prior to each class to provide help with technical problems you encounter.

   b. If you have any questions regarding the equipment set up, please inquire with the Course Management Group via e-mail directly.

   c. If you are a new learner who has difficulties in downloading software, please e-mail the Course Management Group to make an appointment. The Course Management Group can help you online to make sure you are ready for the class.
d. For prospective students, please contact Course Management Group for the placement test if you have not taken the test or have problems with the test.

All in all, we think that we all have a good beginning. Let’s keep our passions with and positive attitude toward the instruction. We believe that you will make a obvious progress sooner with instructor help.
Thank you!

Instructors
Ahmed, Mark, Mike, Tiffany

Course Management Group
Wayne Huang & Dr. Greg Kessler
LiWei & Isaac
APPENDIX E: Correlation among Variables

Correlations

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<th>Interactivity</th>
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*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).
APPENDIX F: Placement Test

Instruction:

1. Have your Audacity open and get ready
2. Check your microphone and volume
3. Have this test open beside the Audacity
4. Have your clock with you
5. From question 1-2, no need to hold “Control” button and click the “Now listen to Audio File” to link to the sound file; from questions 3-6, you need to click it to download and open the sound files to listen and get ready to answer the question.

6. You can take a note when you are listening to the audio file on this paper.
7. Please follow the time to answer each question. The test highly depends on self-regulation and self-esteem.
8. Record your answers in one file through Audacity, zip it, and send it to me (isaaclee168@gmail.com).

Remember: Your computer must have a soundcard with headphones or speakers in order to play the audio files.

Take it easy! Let’s Go!

1. Describe a place that is special to you. Use specific details to support your answer. (Preparation Time 00:15; Response Time 00:45)

2. Some people feel that a degree from a traditional university is more respected than a degree from an online university. What do you believe and why? (Preparation Time 00:15; Response Time 00:45)

3. Please use the following to answer Question 3.

Reading Passage

Please join us in celebrating the grand opening of the new Student Resource Center this Friday at 1 P.M. We will be offering free pizza and drinks, as well as an orientation to the center. This is a great opportunity for you to stop in and meet the staff. The new center will include wireless Internet access. You can bring your own laptop or borrow one from the center. The Student Resource Center also includes tutoring services, career
development services, counseling services, and other academic support services. As always, all services offered by the Student Resource Center are free!

Now listen to Audio File 1

Question: What is Lucy's opinion of the Student Resource Center? Why does she feel this way? (Preparation Time 00:30; Response Time 00:60)

4. Please use the following to answer Question 4.

Reading Passage

Leadership is the ability to influence others to reach a goal. Some leaders are born with special gifts that make them persuasive. Sometimes these gifts can be physical, and sometimes they are personality characteristics. Many of the most influential people in history share characteristics from birth. These characteristics range from things like being tall and good looking to being confident and well spoken. Some of the most common characteristics of leaders can be developed through education and experience. However, many people are simply natural born leaders.

Now listen to Audio File 2

Question: Explain how the examples of Mahatma Gandhi and Princess Diana contribute to the idea of leadership. (Preparation Time 00:30; Response Time 00:60)

5. Please use the following to answer Question 5.

Now listen to Audio File 3

Question: Maya and Professor Kaan discuss two possible solutions to Maya's problem. Describe the problem and the two solutions. Then, explain what you think Maya should do and why. (Preparation Time 00:20; Response Time 00:60)

6. Please use the following to answer Question 6.

Now listen to Audio File 4

Questions: Using the information in the lecture, explain what makes a science fiction novel. (Preparation Time 00:20; Response Time 00:60)

End
APPENDIX G: Summative Test

Instruction:

1. Have your Audacity open and get ready
2. Check your microphone and volume
3. Have this test open beside the Audacity
4. Have your clock with you
5. From question 1-2, no need to hold “Control” button and click the

“Now listen to Audio File” to link to the sound file; from questions 3-6, you need to click it to download and open the sound files to listen and get ready to answer the question.

6. You can take a note when you are listening to the audio file on this paper.
7. Please follow the time to answer each question. The test highly depends on self-regulation and self-esteem.
8. Record your answers in one file through Audacity, zip it, and send it to me (isaaclee168@gmail.com).

Remember: Your computer must have a soundcard with headphones or speakers in order to play the audio files.

Take it easy! Let’s Go!

1. Explain an accomplishment that you are proud of. Use specific details to support your answer. (Preparation Time 00:15; Response Time 00:45)

2. Do you agree or disagree with the following statement?
   *Spring is the best season.* (Preparation Time 00:15; Response Time 00:45)

3. Please use the following to answer Question 3.

Reading Passage

Congratulations to the Modern Health Issues and Business Methodology classes for their success in introducing a new menu in the cafeteria. These two classes worked together to develop menu options with excellent nutrition that will not increase our current menu prices. Based on a survey of more than 100 students, they identified which foods students were most interested in. We are happy to announce that, beginning Monday, many of the healthy choices identified in this survey will be available in the cafeteria. Thanks to the Modern Health Issues and Business Methodology students for all your hard work.
Now listen to Audio File 1

Question 3: What change is taking place at the university? Why is this change smaller than the students might want?

(Preparation Time 00:30; Response Time 00:60)

4. Please use the following to answer Question 4.

Reading Passage

When you access certain websites, a record of information can be stored on your computer as a "cookie." The cookie can be used to record Internet usage information. It can make a record of which sites you visit and any transactions that you complete. This information is often used by companies to develop customer profiles. However, the use of cookies was originally intended to make use of the Internet easier for customers. The cookie was developed to record information so that it would not need to be entered each time a website is visited.

Now listen to Audio File 2

Question 4: What are HTTP cookies and why are people concerned about them?
(Preparation Time 00:30; Response Time 00:60)

5. Please use the following to answer Question 5.

Now listen to Audio File 3

Question 5: What problem does the student have? What are the two possible solutions discussed? Which solution do you think the student should choose and why? (Preparation Time 00:20; Response Time 00:60)

6. Please use the following to answer Question 6.

Now listen to Audio File 4

Questions 6: Using details from the lecture, explain why the professor believes fair-trade coffee is positive. (Preparation Time 00:20; Response Time 00:60)

End
APPENDIX H: Interview of Instructor

1. Would you please tell me about your personal background?

2. How did you use the Synchronous Computer-Mediated Communication (SCMC) system for teaching?
   Probe 1: Which system did you use? (Skype, Adobe Connect)
   Probe 2: How did you use audio and video functions?
   Probe 3: Did you use another function? Why did you choose the functions?

3. What is your general impression of using the SCMC for teaching? What was good about using it? What was not good about using it?
   Probe 1: Have you used the similar system for teaching before? Why?
   Probe 2: Comparing to the face-to-face instruction, which do you prefer? Why?

4. Have you encountered any problems (e.g. technical, social, cultural) when delivering online instruction? If so, what were they and how did you try to solve them?
   Probe 1: How was the quality of sounds?
   Probe 2: How was the quality of images?
   Probe 3: How was the Internet connection?
   Probe 4: Did you find any websites etiquettes or diversity issues? What was that?

5. How do you perceive your teaching role in online instruction? Has the use of the SCMC system changed your teaching mode?
   Probe 1: How did you prepare for your teaching?
   Probe 2: How did you teach?
   Probe 3: What kind of competencies do you think an online instructor should have? Why?

6. How do you perceive the curriculum and lesson plans design?
   Probe 1: Did you think the curriculum can provide more opportunities for students to interact and communicate with each other? Why?
   Probe 2: Did you think the learners help each other to construct their knowledge and improve their oral competencies based on the learning activities?
Probe 3: Did you see learners try to use body languages to convey or negotiate meaning with other peers through video-camera? If so, please describe what you saw.

7. Could you tell me that if you feel your teaching guide students to involve in online peer collaboration?
   Probe 1: Did you see learners help each other to solve the problems they encountered? How?
   Probe 2: How did learners contribute to the discussion?
   Probe 3: Did you group learners to work on tasks or activities together? What did you feel about the group activities?

8. Did you think that use of SCMC could really improve learners’ oral skills? Why?
   Probe 1: Will you teach spoken English course online in the future?
   Probe 2: Will you refer the training program to your friends or other faculty?

9. Did you have more comments?
APPENDIX I: Interview of Learner

1. Would you please tell me a little bit about yourself?
2. How did you use the Synchronous Computer-Mediated Communication (SCMC) system for learning?
   Probe 1: Which system did you use? (Skype, Adobe Connect)
   Probe 2: How did you use audio and video functions?
   Probe 3: Did you use another function? Why did you choose the functions?
3. What is your general impression of using the SCMC for learning? What was good about using it? What was not good about using it?
   Probe 1: Have you used the similar system for learning before? Why?
   Probe 2: Comparing to the face-to-face environment, which do you prefer? Why?
4. Have you encountered any problems (e.g. technical, social, cultural) in the process of learning? If so, what were they and how did you try to solve them?
   Probe 1: How was the quality of sounds?
   Probe 2: How was the quality of images?
   Probe 3: How was the Internet connection?
   Probe 4: Did you find any websites etiquettes or diversity issues? What was that?
5. How do you perceive your learning role in an online context? Has the use of the SCMC system changed your learning mode?
   Probe 1: How did you prepare for your class?
   Probe 2: How did you learn?
   Probe 3: What kind of competencies do you think an online instructor should have? Why?
6. How do you perceive the curriculum and lesson plans design?
   Probe 1: Did you think the curriculum can provide more opportunities for you to interact and communicate with each other? Why?
   Probe 2: Did any learner help you to construct knowledge and improve your oral competencies based on the learning activities?
   Probe 3: Did yourself or other learners try use body languages to communicate with other peers through video-camera? If so, please describe what you did.
7. Please describe the forms of your participation in online class?
   Probe 1: Did you often ask the instructor questions and respond to his/her questions?
   Probe 2: Did you interact with other student when they raised problems and send
   them private notes through the system?
   Probe 3: What did you feel about doing grouping activities in a SCMC context?

8. How satisfied were you with this course?
   Probe 1: What sort of activities do you like most or least in the course? Why?
   Probe 2: What sort of activities do you find most or least useful in the course? Why?
   Probe 3: What sort of activities do you find most or least interactive and
   communicative in the course? Why?
   Probe 4: Were the course activities and assignments appropriate and was content
   well-organized? Why?
   Probe 5: Were you goals and /or expectations met?

9. Did you think that the use of SCMC could really improve your oral skills? Why?
   Probe 1: Will you take spoken English course online in the future?
   Probe 2: Will you refer the training program to your friends or other classmates?

10. Did you have more comments?
APPENDIX J: Observation Notes

Teacher:
Date:
Start time:
End time:
Number of Learner:

Instructor Observations

1. How did the instructor teach and what instructional strategies the instructor used?

2. How the instructor guided learners to discuss in an open, safe, supportive environment (encourage social interaction, affirming individuals’ comments, developing informal use of language), to ensure that learners can access discussions and manage dialogue (directing, selecting, summarizing and re-directing, summarizing, waiting, maintaining multiple strands), and provide meaningful learning opportunities for learners (asking questions, making declarations or suppositions).

3. What kind of activity does the instructor provided for learners? Did any activity promote learners’ collaborative discussion and negotiation of meaning to take place online (manner of discussion/response, size of group for activity, topic of activity/discussion)? (Du, Zhang, Olinzock, and Adams, 2008)

4. How did the instructor monitor learners’ learning processes (asking questions, promptly feedback, timely) (Ng, 2007)? What the instructor was doing while learners were working on learning activity.

5. How did the instructor integrate technology or multimedia with instruction? What kinds of technology or multimedia are used in class? How those tools are used in what kind of activity (social presence, instructor competencies)? (Murugiah, 2005)

6. What kind of problems the instructor encountered? How did the instructor deal with the problems (technology, instruction, personal affection, instructor competencies)? (Lee et al., 2007)

7. What was the role of the instructor playing in class?
Learners Observations

1. How did learners participate in learning activity? What kind of activity they were engaging in? How was each activity going? (social interaction, problem-solving)

2. How did learners prepare for their learning (preview/review class, attending class on time, hand in assignment on time)? (self-regulation)

3. How was the interaction/relationship between learners and the instructor, and learners and learners (negotiation of meaning, verbal/non-verbal)? (Williams, 1999)

4. How often did learners discuss the cultural diversity in the process of learning? Did they heap each other to understand the diversity and how? (social interaction, ZPD, collaboration)

5. What kind of problems learners encountered in the process of learning? How did they resolve the problems? Did they seek for help or receive help from other learners, the instructor, or other sources? (Ross, Crane, & Robertson, 1994)

6. What were the differences of learners’ behaviors between in SCMC and traditional classroom environment? How learners use the SCMC system for spoken English learning? (Williams, 1999)

7. What was the degree of learners’ contributions to the group tasks (collaborative learning, ZPD)? (Kreijns, Kirschner, Jochems, & Buuren, 2007)

8. What was the role of learner playing in class?

Technology Observations

1. Did each participant access the class equally? What kind of technology and multimedia they used and how they used them?

2. How many times learners and the instructors encountered technical problems? (the Internet connection, video and audio breaks, computer system crashed, accessibility)
APPENDIX K: Course Evaluation

**General Directions:** Please respond to the following valuation thoughtfully. The results of this evaluation will be used to provide feedback to your instructor. Thank you for your honest ratings and thoughtful comments.

**Part I:** The following questions are related to your perceptions of the real time online spoken English training program. Please circle a response that corresponds to the following scale for each statement.

1. It was a good experience to take a real-time, online spoken English training program.
   
   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

2. It was time-consuming to take a real-time, online spoken English training program.
   
   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

3. Taking a real-time, online spoken English training program allowed for greater flexibility, not dependent on geography and time.
   
   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

4. I was not interested in taking this real-time, online spoken English training program.
   
   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

5. It was a great challenge for me to taking the real time online spoken English training program.
   
   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

6. I liked learning spoken English in this real-time, online environment.
   
   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

7. I felt exhausted due to the loads of learning activities and assignments in this real time online training program.
   
   Strong Disagree      Disagree      Neutral      Agree      Strong Agree
8. I could handle the problems with computer and the Internet connection during the class without help.

   Strong Disagree  Disagree  Neutral  Agree  Strong Agree

9. I had no confidence with computer and the Internet connection troubleshooting for this real-time, online spoken training program.

   Strong Disagree  Disagree  Neutral  Agree  Strong Agree

10. During the learning process, accessibility was unstable.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree

11. It was difficult for me to work on assignments or discussion forums on Moodle system.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree

12. I felt comfortable answering questions to other learners and the instructor.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree

13. I feared to use this real time online system (Skype, Adobe Connect) to learn spoken skill in the future.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree

14. Clarifying the learning objectives by the instructor was helpful for me to complete learning.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree

15. I could not benefit from the instruction with regard to the real-time, online system.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree

16. I could interact more and speak more with my classmates and instructor.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree

17. Proving teaching contents and materials in advance was not helpful to encourage me more to participate in communication with my classmates and instructor.

    Strong Disagree  Disagree  Neutral  Agree  Strong Agree
18. Providing teaching contents and materials in advance did not increase my participation and communication with my classmates and instructor.

   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

19. This real-time online spoken English training program is a valuable investment of time and effort.

   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

20. I felt stressful to speak English with a native English-speaking teacher through the real time online system.

   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

21. After this real time online training program, I felt confident to speak English to a native speaker of English.

   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

22. Overall, the real-time, online system is not an effective tool to learn spoken English.

   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

23. I will continue using the real-time, online system to improve my English oral competence.

   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

24. I would like to recommend this kind of real time, online spoken English training system and share my experience to other learners.

   Strong Disagree      Disagree      Neutral      Agree      Strong Agree

**Part II: Overall Comments and Suggestions**

1. What are the most valuable things you have gained from this real-time, online training program? (Possibilities may range from acquisition of very concrete skills or knowledge, to changes in perspective or ways of thinking.)
2. What specific course activities and materials did you find most valuable? (Consider group discussion, role play, debate, assignments, learning reflections, feedback from the instructor, etc.) How did these activities or materials help you to learn?

3. What recommendations would you make to the instructor to strengthen his or her teaching and to help learners learn? (Consider content, materials, activities, assignments, feedback, teaching strategies that should be dropped or added)

4. What additional comments or suggestions could you offer?
APPENDIX L: Social Presence—Finding and Discussion

Finding

Related to the study on interaction and communication in a web-based language learning environment is the concept of social presence. Social presence refers to the “degree of salience of the other in the interaction and the consequent salience of the interpersonal relationships” (Short et al., 1976, p. 65). Social presence highly depends on the characteristics of the medium and the users’ perceptions. The immediacy and intimacy (the perceived familiarity) of the interlocutors can promote social presence. Short et al. suggested that users choose media with a better sense of immediacy and intimacy since the media will affect interaction and the users’ willingness to communicate. Gunawardena (1995) supported this view and indicated that the degree of social presence of a media relies on information regarding facial expression, eye contact, posture, dress and nonverbal cues that the capacity of the medium is able to transmit. Social presence was found to be a strong variable to promote learning (McIsaac & Gunawardena, 1996) and to increase learner’s satisfaction with learning in web-based environments (Gunawardena & Zittle, 1997).

Learners can behave in varied media similar to that in face-to-face contexts in which rich social presence exists. Levey and Stockwell (2006) studied traditional text-based CMC and indicated that though it lacks social cues, learners can increase social presence through typing emoticons. Zhner, Fauverge, and Wong (2000) found that SCMC with multimedia (audio conferencing and video conferencing) might provide better learning than text-based CMC due to the offering of social cues. In the present
study, learners were using SCMC with text, audio, and video communication functions (e.g., Skype and Adobe Connect) for oral skill learning. Based on the interviews, they recognized that the degree of social presence (e.g., images, body language, facial expressions) might be an important factor in their learning and their understanding of the association among the degree of social presence, SCMC, and language learning.

Learner 1: I had the habit of observing people’s facial expressions while they were talking. This way could help me to understand other people exactly . . . . If the video functions had gone smoothly, we would have had better learning outcomes, communications, and interactions in class because we could notice other participants’ reactions and facial expressions in a timely manner . . . . Participants could understand each other best if the participants could see each other’s facial expressions and gestures.

The learner recognized that facial expressions and body language could not only help them understand other learners, but also have a better interaction, communication, and learning outcome in an SCMC environment. The following learner stated that images generated by the web camera were also helpful for achieving learning objectives, especially for the beginning level learners.

Learner 4: We used Adobe Connect for the last couple of classes. We could see other learners at the different locations through the use of a web camera. The images could somewhat meet some needs for language learning. Learners, like me, who did not have a good command of English, usually needed appropriate gestures or body language to express their opinions . . . . It is hard to provide images and
comprehend the dialogue since it lacks the use of body language, especially for beginners.

The learner below thought that the presence of learners’ images provided by web video could motivate them in participating in discussion more than voices by audio function alone could.

Learner 5: I think if we could see each other through the video camera, we would feel more close to each other, just like we were in a traditional classroom. Even though we could communicate with other peers using only audio functions, I felt differently if we used the video camera to communicate. I do not think it is necessary to use the video camera in every class. However, I think if we could have used the video camera in class discussions to see each other’s expressions and body languages, we would have participated in the discussions more enthusiastically. Yes. It is like attending a video conference.

Learner 6: It was good to use video cameras in class because you could see other peers’ motions and reactions and had a better understanding of the meanings they expressed. Most of the time, I would not stare at the video camera because I would pay attention to the information on the whiteboard in Adobe Connect, videos, and articles as well. I think video cameras can help learners learn English when there is no image delay because learners’ can have a better understanding of other peers’ reactions based on their body language. I would perceive that other peers
agreed with my opinions by seeing them nodding or smiling through the video camera.

The learner also agreed that there was a positive association between social cues (e.g., body language, nodding, smiles, motions). However, though he recognized that social cues were important for him, he preferred not to focus on the video all the time so he could concentrate on all the information performed on the SCMC system. This finding is in accordance with Yamada & Akahori’s study (2007). They found that the presence of learners’ images reinforced the audio communication. However, learners would be more apt to concentrate on text message exhibition than video images. The reason might be that the text messages could help learners reinforce their understanding of the concept or other learners’ meaning and expressions. The following learner also downplayed the importance of the presence of images.

Learner 7: I could see the instructor’s and classmates’ body language, but they did not notice those gestures. I felt when comparing body language in an online course with a face-to-face course that the latter one could provide more than the former one. In an online class, we could only see other people’s faces, so the images were not so helpful with comprehension of the conversations among us. However, if we only had audio, we could not see other participants’ faces and reactions. If I can have a video part, I will know whether other participants can understand what I am taking about through their body language, such as nodding or shaking their heads. So, the video part is somewhat helpful. I usually did not watch the video part during the class since I liked to focus more on the class and learn how to
speak well. So, I listened to other participants’ speech more than their body
language on the video. I paid more attention to the sound parts rather than the
image parts.

The following examples of discourse present the social presence from the
recordings of classes. Body language, fillers, and nonverbal communication among
learners enhance communication, interaction, and negotiation of meaning as well as
language learning.

Discourse 1: (Audio Recording)

<table>
<thead>
<tr>
<th>Line</th>
<th>Dialogues</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Instructor C: Oh, yeah. And how much that is different in Chinese culture</td>
</tr>
<tr>
<td>02</td>
<td>compared with this one. I don’t know; it is based on…I am sure it is based on body</td>
</tr>
<tr>
<td>03</td>
<td>language here in the United States. But, not as always as the same everywhere</td>
</tr>
<tr>
<td>04</td>
<td>should go. Are there any types of body language that you know need to be</td>
</tr>
<tr>
<td>05</td>
<td>discussed in the Chinese culture?</td>
</tr>
<tr>
<td>06</td>
<td>Learner 1: Uhnn…</td>
</tr>
<tr>
<td>07</td>
<td>Instructor C: As like a good example here. When you are talking to</td>
</tr>
<tr>
<td>08</td>
<td>somebody. It is not good for you to cross your arms. [pause] For some, that would</td>
</tr>
<tr>
<td>09</td>
<td>phrase a negative body language. For some [pause]… to some, that kind of phrase,</td>
</tr>
<tr>
<td>10</td>
<td>that would phrase, “Hey, I am closed off to you….uhnn.”</td>
</tr>
<tr>
<td>11</td>
<td>Learner 1: Uhnn, yeah! … Uhnn, in China maybe [deep breath] maybe shows</td>
</tr>
<tr>
<td>12</td>
<td>self-confident. In some sense, negative behavior…uhnn..</td>
</tr>
</tbody>
</table>
Instructor C: Yeah.

Learner 1: Maybe in China… uhnn…in the USA, maybe defensiveness.

Instructor C: Yeah. How about the eye contact thing? You know, in some cultures, eye contact is important; while in another culture, eye contact is not as important.

How about in the Chinese culture?

Learner 2: I think…uhnn…in the business world as people are getting more international

Instructor C: uhnn..

Learner 2: and Chinese people are more aware of the importance of eye contact in communicating…uhnn…in communication, I mean.

Instructor C: Yeah. Was the eye contact thing important before in China,

Learner 2? Or is something evolving or changing?

Learner 2: Uhnn…

Learner 2: I think it is something evolving and changing. I don’t think eye contact is as important as it is now.

Instructor C: Ok! Yeah! Ok! That’s a good observation. I can say that in the Philippines, eye contact is not that important, but here in the United States, eye contact is very important, especially in business. I think that a lot of people…if you are in business situation and you are looking down and not paying attention, people think you do not pay attention and give a negative body language.

In discourse 1, Line 06, the filler “Uhnn” was used for the learner to express that he was thinking of the instructor’s question and trying to formulate a response. In Line 08
and Line 09, the instructor paused for a while to implicitly express that he was thinking what to say next. That is, the two pauses were used to bridge the previous and coming words. This same purpose can be seen in the filler “uhnn” in Line 10, 11, 14, 22, and 25. However, the filler “uhnn” in Line 20 indicated that the instructor agreed and supported the Learner 2’s opinion. That is, the instructor used the filler as a communicative strategy to encourage Learner 2 to continue her expressions. The filler “uhnn” in Line 18 was used not only as a bridge to connect both the previous and coming sentences, but also as a way to formulate her opinion.

Discourse 2: (Video recording)

<table>
<thead>
<tr>
<th>Line</th>
<th>Dialogues</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Instructor A: Ok, so how about advertisement? What is advertisement?</td>
</tr>
<tr>
<td>02</td>
<td>Learner 7: Uhnn…[looking around] Advertisement…uhnn [looking at the computer]…Advertisement….</td>
</tr>
<tr>
<td>03</td>
<td>Instructor A: And Learner 1, please feel free to jump in as well.</td>
</tr>
<tr>
<td>04</td>
<td>Learner 1: Uhnn [looking at ceiling]…yes…uhnn [keep looking at ceiling]…Advertisement just told the leaders or audience some information about our products. The connection…uhnn [looking at the computer]…the connection ways such as telephone number or website [Instructor A: Good! Good! (nodding and smiling)]</td>
</tr>
<tr>
<td>09</td>
<td>ust talk to the audience…If you are interested in our products, you can connect us, and [pause], or you can find our product in department stores. Or, some shop [Instructor A: Good! Good! (smiling)] such as… [Instructor A: Good!</td>
</tr>
</tbody>
</table>
Instructor A: The advertisement reviewed what were they trying to do. What were they trying to get you to do? Were they trying to get you to buy something, or to change your mind, or to do something?

Learner 1: They just tried to attract us [pause] our eyeballs. They don’t explain the functions because these three companies are famous. If you are interested in this kind of car, you can log in on the website to search for information about this car. So, just want to to attract and uhnn….and uhnn told you they are very amazing, want you to read something more detailed.

In this discourse, Line 02 shows that the learner used the filler “uhnn” twice when he was constructing his opinion with which he might be familiar or not. The instructor seemed to know that the learner was not ready for the question based on the sound “uhnn” and the image (kept looking around and at the computer) of the learner, so she gave an opportunity for another learner to try. The filler used by the other learner in Line 05 was his attempt to affirm himself and to get ready to express his opinion. In Line 07, the filler “uhnn” was used between the same two words to show that he tried to confirm the correctness of the word before continuing his reply. In Line 09, 12, and 13, the instructor used the verbal word good, body language nodding, and non-verbal smiling to support his opinion. Most importantly, she used those as a communicative strategy to encourage the learner to keep expressing his opinion. Another non-verbal can be found in Line 17 to show that the speaker paused before considering changing to another word. In
Line 21, the learner repeated the same filler “uhnn” twice to modify his word after the second utterance “uhnn.”

Discourse 3: (Video recording)

<table>
<thead>
<tr>
<th>Line</th>
<th>Dialogues</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Instructor D: Penny Pincher. [Learner 6 is staring in another direction instead of his laptop] This relates to money and business in general. Penny pincher. Do you know what pincher is? Learner 3?</td>
</tr>
<tr>
<td>02</td>
<td>Learner 3: No.</td>
</tr>
<tr>
<td>03</td>
<td>Instructor D: Do you know what pincher is? Okay. Pincher is like a …uhnn…any [pause] How I can explain it? [pause][the instructor was looking down and trying to search for something] I don’t know how to show you. I am pinching my arm [Instructor raised his left arm and used his right hand to pinch his left arm]. You see. [Learner 3: Oh! Okay.] So, that is pinch. A penny is the lowest currency …uhnn the lowest American currency. Okay! [Learner 3 and Learner 6: Uhn! Uhn!] It is equal to one. So that is penny. So, penny-pinch is someone who is cheap, all right? Someone… uhnn… who is looking for deals who doesn’t spend much money, a penny-pinch. So, they hold down every penny. That’s what it means, pinching.</td>
</tr>
<tr>
<td>09</td>
<td>Learner 3: So, you mean “stingy”?</td>
</tr>
<tr>
<td>10</td>
<td>Instructor A: Yes, stingy. That is a good one.</td>
</tr>
</tbody>
</table>

In this discourse, in Line 01, the learner is looking elsewhere and not looking at his laptop while the instructor was offering a new slang term. Actually, since the term was
new for the learner, he was thinking or guessing what the meaning of the slang was. So, the instructor directly asked the same question for another learner later. In Line 05, after the filler “uhnn,” the instructor paused for a while. Both the filler and non-verbal *pause* indicated that he was formulating a way to clarify the slang. The instructor was also looking around [body language], trying to figure out how to explain the concept of *penny-pincher*. Again, the instructor used body language to explain the meaning of pinching. From the video, he raised his right hand and pinched his left upper-arm. After that, all learners understood the meaning of pinching (see Line 09, the learner’s feedback). In Line 10, 11 and 12, the filler was used as a bridge to connect two words; the learners used the same filler “uhnn” twice together to say that they understood the meaning of the slang.

Discourse 4:

<table>
<thead>
<tr>
<th>Line</th>
<th>Dialogues</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Instructor D: Have you ever heard the word <em>moola</em> before?</td>
</tr>
<tr>
<td>02</td>
<td>Learners: Moola?</td>
</tr>
<tr>
<td>03</td>
<td>Instructor D: [smiling] [Learner 6: smiling; Learner 3: smiling]</td>
</tr>
<tr>
<td>04</td>
<td>Instructor D: Never?</td>
</tr>
<tr>
<td>05</td>
<td>Learners: Never.</td>
</tr>
<tr>
<td>06</td>
<td>Instructor D: Never? So, you never heard it</td>
</tr>
<tr>
<td>07</td>
<td>Learner 6: I never heard this…</td>
</tr>
<tr>
<td>08</td>
<td>Instructor D: And…because coming out, someone is very affluent;</td>
</tr>
<tr>
<td>09</td>
<td>someone is very rich, never say moola. Maybe, money, currency, even dollars.</td>
</tr>
</tbody>
</table>
Moola is something that is street language. Okay? So, do you see anything in China. Do you see any street language in China? Street language in business?

[Learners were looking at their laptop and kept quiet for a couple of seconds.]

[Learner 3: scratching his head] Anyone? [Learners looked at their laptop and kept quiet for a few more seconds] If you go to a market place, you are trying to haggle the price...uhnn...the men are selling oranges. Let’s say...let’s use an American term. So, the man is trying to sell 10 oranges per dollar, okay, but you are willing to try to talk the price down. Are you going to be very formal for everything, or are you gonna say “could you please go down on your price?” Or, would you speak another way?

Learner 3: Yeah, uhnn...actually in China, the Chinese language is divided into spoken language and written language. In almost all the time we speak with others oral. So, only in written English, we use in the business occasion. Even in the business occasion, we will use all the language. Some may use formal language like written, just write it down, maybe we use written language. So maybe there is a little different [Instructor D: Okay.] there is a little different... uhnn...difference between English and Chinese language.

Instructor D: Right!

Learner 3: If we when we are bargaining, we use oral language. But in the business occasion, we also use it.

In this discourse, Line 03, the instructor was smiling [non-verbal]. He smiled because he thought that the slang, moola, was a very interesting term used as an informal
expression in conversations. However, the learners were all smiling to react to the instructor’s feeling. That is, this kind of interaction usually occurs and can be seen in daily conversations. It shows a kind of relationship and interaction among interlocutors. In Line 12 and 13, the learners kept looking at their computer or scratching their head after the instructor requested an answer from them. From the learners’ body language and nonverbal expressions, the instructor knew that the learners were still thinking of the question, so he tried to encourage them to respond. Then he said *anyone* to check to see if anyone was willing to respond to the question. However, the learners kept silent and watched their computer for a while. In so doing, the instructor realized that the learners were not ready to respond to the question, so he started to give them an example. In Line 20, the learner used the filler, *Yeah*, and another one, *uhnn*, to express that he had the same thought as the instructor and wanted to express his opinion. In Line 26, the learner used a filler, *uhnn*, to try to modify the previous word which he knew to be incorrect.

The interlocutors used different types of facial expressions, body language, and nonverbals in the process of conversation. The presence of each interlocutor presented through the media helped them to interact and communicate with each other, to negotiate meanings, and to achieve their goals. However, learners also recognized that some factors affecting social presence would not only influence interaction and communication, but also decrease learning motivation. For example, an unstable Internet connection caused delayed images and sounds during some class sessions. From the participant observation, the average time of image delay was 0.03 to 0.04 seconds. In this range, the participants could understand each other when social presence occurred. If it
was more than this range, it was hard for participants to match the sounds and images to understand the meaning of each presence transmitted from the other participant(s). That is, the Internet connection could be a main factor affecting social presence.

Learner 1: The audio functions were not smooth, and the video functions were delayed in Adobe Connect. I could see my images smoothly on my computer. However, the images from the instructor and the classmates delayed seriously. Sometimes, the images of facial expressions and the voices from the instructor and the classmates did not match at all. I was not sure how well my images were when they were seen by my instructor and classmates on their computers . . . . When the images were not transferred as fast as the voices, I did not have an interest in seeing the images anymore. Most of the time, I would determine speakers’ emotions and meanings based on their voices only. Participants could understand each other best if the participants could see each other’s facial expressions and gestures. I remembered the images delayed, even frozen seriously one time. I felt it was funny to see the images of one participant who was laughing but hear another participant’s voice at the same time. I would have been confused if there were two female participants with similar voices talking in class since I could only differentiate participants by their voices, not their images.

In addition to the Internet connection, the function of the SCMC system provided limited the degree of presence during communication. In the present study, social presence was hard to identify because the image presented only participants’ heads.
Furthermore, on some occasions the instructor had to minimize the images to meet the needs of different learning activities.

*Learner 3: In my opinion, I do not think the video camera enhanced English learning effectively. I think people can learn English well via a whiteboard and a headset. The video cameras could only help the participants to understand each other's meanings more clearly but could not enhance the learning. Since the window of the video camera was not big, it was not easy to see the motions of other learners' bodies clearly. I think the first step to learning a language is to understand it by listening even though it is necessary to have the abilities to use body language (e.g., gestures) to communicate with other peers. It is very important to enhance the listening skills first in the process of learning spoken English.*

*Learner 4: However, it could be difficult to communicate with other people without the images. For Adobe Connect, it has its constraints. For example, the users are required to be seated to communicate with other people, so they can only see other people’s head. Besides, the images sometimes were delayed due to the poor connection . . . . It was hard to recognize the exact interaction from other learners’ facial expressions since the images oftentimes were delayed. It was hard to communicate with others through the delayed images.*
Because of the constraint of the image size, some participants chose not to look at the images, but rather focus on the sounds. Gradually, they ignored the video images entirely.

Discussion

According to Short et al. (1976), social presence means the degree of presence that a communicator can project himself or herself as a real person through interacting with other people. The concept of intimacy, defined by Argyle and Dean (1965), refers to interpersonal interactions, including verbal and non-verbal behaviors (e.g., eye contact). Weiner and Mehrabian (1968) related social presence to the concept of immediacy, a measure of psychological distance (e.g., nodding and smiling). The concept of immediacy in the traditional classroom environment provides implications for teaching and learning through web-based communication. In particular, Short et al. (1976) argued the relationship between users and media. They assumed that different media provided varied degrees of presence for a communicator who was recognized on the basis of his or her behaviors and appearance. They found that text-based computer-mediated communication has less social presence compared to the media with audio or video functions.

A study by Lu et al. (2007) on interaction and social presence in technology-mediated learning (TML) argued that oral interaction had more of a significant impact on social presence than text-based interaction. Besides, social presence had a substantive impact on e-learning. They further analyzed related articles regarding social presence to
suggest a partial least square model for understanding the associations among voice interaction, text-based interaction, and learning (Figure 3). In conclusion, they suggested that “oral and face-to-face interaction is still very important for TML environment” (p. 4414). Most importantly, oral and face-to-face interaction could help learners promote their learning performance and solve the learning problems in TML.

In this study, the SCMC system contained audio, video, and text-based functions to provide the oral and face-to-face interaction, and degree of presence for learners and instructors. However, the results showed that the instructors and learners found that social presence in class was affected by the delayed images, sound breaks, and limited image size. The Internet connection and broadband speed might cause the poor oral and face-to-face interaction. The limited image size might not meet the needs of learners in the online, real-time language learning environment of this study.

Learner 4 stated that when the quality of connection was unstable, the images and sound were delayed and broken which limited the use of body language and affected authenticity in the online class. Learner 1 said that his learning enthusiasm and motivation were affected by the same problem.

After the technology testing stage, it was recommended that all participants use a desktop computer with high speed bandwidth, plugged in with a wire cable and the necessary features to remedy problems with bandwidth. However, most participants owned and used a laptop computer and wireless connection for their learning. Consequently, the lack of social presence might have been hindered by participants’ technology which could not meet the requirements listed in the learning policy that had
been sent to all learners before the first class. Moreover, some learners connected to the class in a crowded and public location using a wireless connection with weak reception (e.g., café shop). Other learners connected to the class at home but had frequent interruptions by family members (e.g., kids). These factors affected the sound quality and the learners’ concentration on the class. These findings suggest the importance of online course management and technical support.

Figure 3. Research model (Interaction, social presence in technology mediated learning—A partial least square model)

In summary, although most participants in the study agreed and recognized the benefits that the SCMC environment could provide for them (i.e., convenience, low-cost, learning achievement, boundlessness of geography and time, and flexibility), they preferred to teach and learn in a traditional face-to-face environment that provides greater levels of interaction and social presence. The delayed images and sound breaks caused by the poor Internet connection and limited image size did affect and decrease interaction and social presence during the class. When noises, sound breaks, and delayed images appear, the *one affects all* effect occurs, and the learners’ motivation and enthusiasm in learning decreases.
APPENDIX M: Ohio University Consent Form

Title of Research: A Case study of Using Synchronous Computer-Mediated Communication System for Spoken English Teaching and Learning Based on Sociocultural Theory and Communicative Language Teaching Approach Curriculum

Researcher: Cheun-Yeong Lee

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to sign it. This will allow your participation in this study. You should receive a copy of this document to take with you.

EXPLANATION OF STUDY

The purpose of this study aims to understand the instructors’ and the learners’ experiences with the use of web-based communicative system for spoken English teaching and learning. All participants will engage in the research and teach or learn through the training program based on the schedule and stages. The training program is planned to start in May, 2008 and will complete in June, 2008. Some of participants will be selected to be interviewed to understand their experiences with the training program. The interview will be video and audio recorded for analysis of data for the research.

Risks and Discomforts

The researcher involves no known risks or discomforts to you.

Benefits

The participant instructors will obtain online teaching experience to prepare for their career in the future. As for the learners, they will engage in learning activities to enhance their oral competence. Both the instructors and the learners will learn and understand cultural diversity from each other.

Confidentiality and Records

All collected data will be stored electronically on a password protected computer that only the researcher can access. They will be destroyed after the research project completed (within six months of data collection).

Compensation
All instructors will teach three hours a week for seven weeks and be paid for ten dollars per hour. In addition, each instructor will participate with weekly professional development and will also be paid ten dollars per hour for compensation.

Contact Information
If you have any questions regarding this study, please contact the researcher, Cheun-Yeong Lee. E-mail address: cl423504@ohio.edu Home address: 10 N Shannon Avenue, Athens, Ohio 45701, the United States

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

By signing below, you are agreeing that:
- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions
- known risks to you have been explained to your satisfaction.
- you understand Ohio University has no policy or plan to pay for any injuries you might receive as a result of participating in this research protocol
- you are 18 years of age or older
- your participation in this research is given voluntarily
- you may change your mind and stop participation at any time without penalty or loss of any benefits to which you may otherwise be entitled.

Signature

Date

Printed Name

Version Date: 4-18-2008
俄亥俄大学同意书

研究课题：英语口语教与学中同步计算机中介媒体系统的使用研究
课题研究者：李春勇

你现在被邀请参加一个研究项目。要确定你是否参加这个项目，你应了解这个项目的内容，可能存在的风险及获益情况，以便在知情的情况下作出决定。这个过程称为告知同意。这份同意书描述了参加项目的目的，程序，可能的成果及风险等；也解释将如何使用以及保护你的个人信息。一旦阅读此同意书，并且对研究项目不存疑问之后，你将被要求在同意书上签字。签字后你即正式参于研究项目。你会持有一份同意书的复印件。

研究说明
这个研究的目的是了解授课者与学习者使用同步计算机中介媒体进行英语教与学的经验。所有参加者将依据课程表及阶段进程通过训练课程授课与学习。训练课程计划于2008年五月开始，2008年六月结束。部分参加者将被挑选参加训练课程经验的访谈。访谈的录像或录音记录将作为研究的分析数据。

研究风险与不适
本研究不会导致参与者风险与不适。

获益
参加授课者将获得网上教学经验，为未来的教学工作做预备。学习者可在参与的学习活动中加强英语口语能力。教学双方都将从对方学习和了解文化的多样性。

保密与记录
所有收集的资料数据将存储于设置有密码保护的计算机，只有课题研究者本人可以提取。资料数据将于研究项目完成后毁掉（资料数据收集后6个月内）。

报酬
所有授课者将持续七周每周授课两个小时，领取每小时十美元的报酬。此外，每个授课者还将参加每周一次的教师进修，也将获得每小时十美元的报酬。
联系信息

有关此研究项目的任何问题，请联系课题研究者：李春勇，电子邮件地址：
cl423504@ohio.edu 家庭住址：10 N Shannon Avenue, Athens, Ohio 45701, the United States

有关研究项目参与者权利的问题，请联系俄亥俄大学科研遵守办公室主任：Jo Ellen Sherow，联系电话：(740)593-0664.

若在下面签名，表明你同意以下几点：

- 你已经阅读这份知情同意书（或者他人已向你宣读），并且你有机会就相关问题提问。
- 针对你的已知风险课题研究者已经向你解释。
- 你了解俄亥俄大学没有政策或计划赔偿任何源于你参加这个研究协议的伤亡。
- 你是18岁以上。
- 你自愿参加这个研究项目。
- 你可以随时改变主意或中断参加研究，而不会因此受到惩罚或失去任何你原来被赋予的利益。

签名

日期 年 月 日

名字
APPENDIX N: Institutional Review Board

A determination has been made that the following research study is exempt from IRB review because it involves:

Category 1 - research conducted in established or commonly accepted educational settings, involving normal educational practices

Project Title: A Case Study of Using Synchronous Computer-Mediated Communication System for Spoken English Teaching and Learning Based on Sociocultural Theory and Communicative Language Teaching Approach Curriculum

Project Director: Cheun-Yeong Lee

Department: Educational Studies

Advisor: Sandra Turner

Rebecca Cale, Associate Director, Research Compliance Institutional Review Board

Date: 4/21/08

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved by the IRB as an amendment prior to implementation.
The amendment, detailed below, and submitted for the following research study has been approved by the Institutional Review Board at Ohio University. Approval date of this amendment does not affect the expiration date of the original approval.

Amendment: Revised Research Questions; Revised Interview Questions/Probes for Instructor and Learner


Project Director: Cheun-Yeong Lee

Advisor: Sandra Turner

Department: Educational Studies

Rebecca G. Cale
Institutional Review Board
5/16/08 Date